PUBLIC
HEALTH
FOUNDATION
OF INDIA

Report of the International Conference on New Directions for Public Health Education in Low & Middle Income Countries

12-14 August 2008, Hyderabad, India

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International Conference on

New Directions for Public Health Education in Low and Middle Income Countries

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We thank the resource persons and experts, as well as delegates and participants who participated, contributed and joined us at the event and made it a success. We hope to carry the recommendations of this Report forward through collaborative proposals and partnerships with other institutions in the LMIC in the future.

Foreword

Public Health is at a critical phase of its evolution in low and middle income countries (LMIC). Even as the health transition imposes multiple disease burdens on LMIC, health systems are enfeebled by deficient public health-related capacity. This is evident in weak infrastructure and organizational frameworks but is most apparent in the limited numbers and functional competencies of the human resources available for advancing public health-related policies, programmes, education and research.

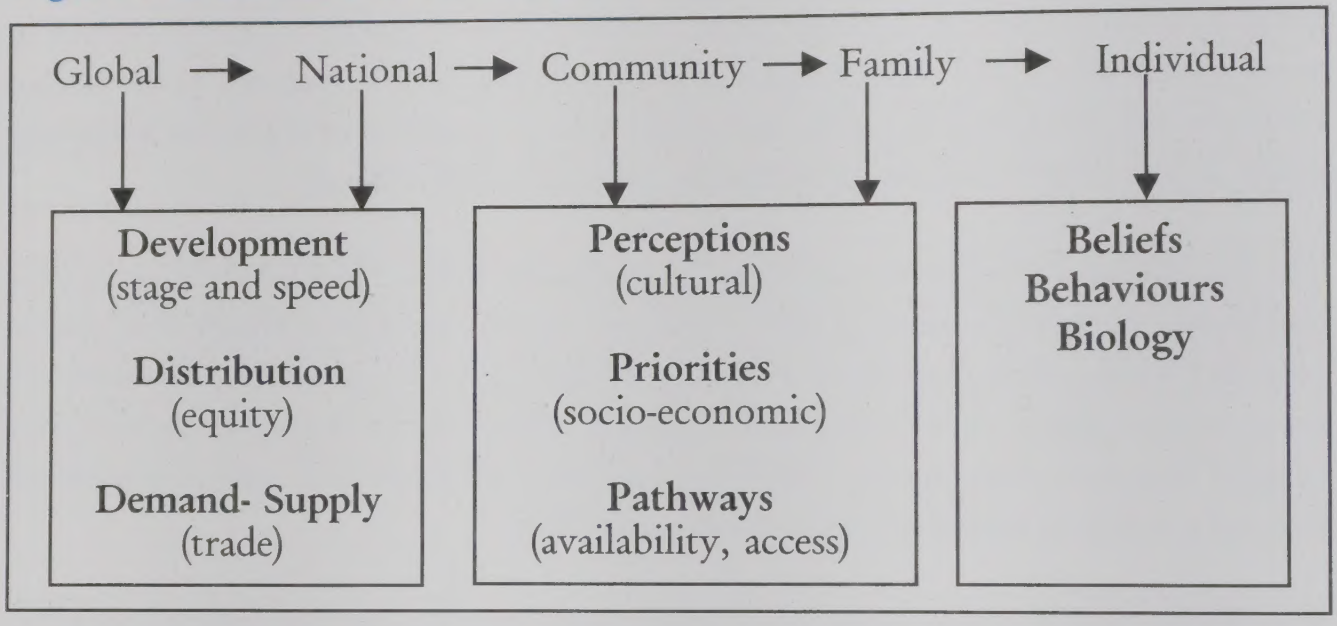
The International Conference on "New Directions for Public Health Education in Low and Middle Income Countries (LMIC)" was convened by the Public Health Foundation of India (PHFI) to bring together a wide range of public health experts from all continents, on a common platform, to examine how public health education must be reconfigured to meet complex contemporary challenges and respond to exciting new opportunities that are evident or emerging in developing countries.

World over, health is now being increasingly recognized as a developmental imperative and also gaining greater respect as an inalienable human right. Policymakers as well as people are beginning to look at dimensions of health beyond health care, and strategies to improve the health status of societies are increasingly incorporating population level policy interventions alongside conventional efforts to provide medical services to individuals. The multiple determinants of health (economic, socio-cultural, behavioural, biological and environmental) are now recognized to interact in myriad ways to provide a local context even as globalization aims to alter many of those determinants through a process of fast-paced transformation across societies at different stages of development.

It is being increasingly recognized that these determinants of health are multiple, ranging from a broad array of individual factors to a wide spectrum of societal influences (fig.1). The balance between health and disease, in individuals as well as populations, is determined

by the interactions between these variables. The focus of causal research as well as the pathways of health action have now extended from factors that operate at the individual level (beliefs, behaviours and biology) and those which operate at the level of families and communities (cultural perceptions, socio-economic priorities and available pathways of access to health promoting facilities and services) to upstream determinants which operate at the national and global levels (stage and speed of development, equity profile of distribution and the dynamics of demand-supply in trade).

Figure 1: Determinants of health



In a rapidly globalizing world whose interconnectivity, through trade and travel, coalesces commerce as well as cultures across the globe, the consciousness of a collective human destiny is more profound than ever before. An imperilled environment, with the threat of global warming, heightens this awareness with alarming urgency. Even as the influences on human health acquire a global dimension, the impact of disease (in humans as well as animals and plants) can be wide-ranging, as the recent threats of SARS and Avian Influenza have shown. Tobacco and unhealthy foods cross borders with ease and compete with viruses in search of vulnerable victims. The effects of ill health in any population are no longer confined to an isolated fragment of the human family but rapidly reverberate across the world, endangering economic development, social stability and overall security in other regions.

As the determinants of health and disease range from molecules to markets and the arena of health action expands to accommodate clinical approaches for reducing risks as well as social initiatives for enhancing rights, there is a clear and urgent need for global accord on health promoting policies. Such a global impact on health policies will enable a global thrust to counter the global threats that endanger a world which has grown more compact. Collective vulnerability must lead to concerted action. Partnering with other nations to address global health threats is a commitment which combines both ennobling altruism and enlightened self interest.

Public health has not succeeded in drawing upon inter-disciplinary research and multi-sectoral action to the extent needed. The multiple determinants of health need to be studied through a confluence of biological sciences, social and behavioural sciences, epidemiology and other quantitative sciences as well as economics and management sciences. It has now been recognized that even the study of gene-environment interactions requires trans-disciplinary research. Incomplete integration of research methods and results inevitably lead to inadequate or inappropriate policies. Discipline-specific research has frequently failed to cross boundaries and build bridges. Similarly, it has failed to sensitize policymakers in other sectors to the needs of public health, despite the fact that the most powerful influences on health operate outside the domain of the traditional health sector.

The 'Public Health' community must learn to promote the culture of connectivity across disciplines and should persuade policymakers to institutionalize inter-sectorality in addressing health problems. Inter-sectorality needs to evolve from hastily assembled, sporadic and ad-hoc responses to public health crises to a thoughtfully-created, sustained and well-coordinated mechanism for addressing all relevant determinants of health in a concerted manner. To succeed, such inter-sectorality needs a political mandate that is developed at the highest decision-making levels, globally and nationally. It is in this context that political, economic and foreign policies should converge in the interest of global health.

Public health acquires greater importance than ever before, under these conditions. Even as LMIC aim to accelerate their economic development, the challenges of protecting and promoting health are becoming even more formidable because of the multitude of

disorders unleashed by the health transition and huge health inequities arising from an uneven distribution of developmental gains. Greater investments in public health are needed to ensure a comprehensive response to these complex challenges.

The precept and practice of public health must adapt to these contemporary needs, if the health status of populations in LMIC is to be improved. Apart from meeting the large shortfall in availability of the health workforce, at several levels, the knowledge and skills of public health professionals and functionaries have to appropriately and adequately design delivery of public health services at the desired quality and scale. Inter-disciplinary learning, which enables public health professionals to identify multiple determinants of health and influence them through multi-sectoral pathways, must be promoted through a fusion of several disciplines which have hitherto been taught in relative isolation. Public health learning needs to become more 'real -world' oriented and equip the policymaker and practitioner alike, with problem-solving skills.

Increased connectivity of public health education to health systems becomes especially important in this context. The health system does extend beyond health services and incorporates activities in other sectors which impact on the health of populations. Health services do, however, form a very important part of the health system. It is imperative to increase the interface of public health education with the health system, especially with health services at various levels, to ensure that public health trainees in LMIC can become effective change-agents and elevate the health system towards greater efficiency and equity.

This Conference worked like a Consultation that aimed to explore such and other issues, relevant to the curricular content and pedagogical methods of public health education in LMIC, while defining the desired competencies and potential career tracks for public health professionals being trained in LMIC. Recognising that many of the LMIC institutions of public health education are recently established or just emerging, the consultation also aimed to create a platform for continued connectivity which facilitated an exchange of experiences and sharing of resources across the LMIC institutions. It also sought to establish knowledge bridges for mutually beneficial partnerships with public health institutions in the developed countries.

PHFI recognizes the need to mesh its mandate of strengthening the architecture of public health in India with emerging global initiatives to upscale public health education and strengthen health systems across a wide array of LMIC. It especially values the potential partnerships with public health institutions in other LMIC, even as it welcomes collaboration with and support from institutions in the high income countries which have a commitment to partnerships in global health.

The conference organized by PHFI, in August 2008 at Hyderabad, helped to create a platform for global partnerships in advancing public health education in LMIC. By aligning interests and pooling resources, LMIC institutions can benefit from the synergy of collaboration and collectively create a large pool of appropriately skilled and adequately motivated public health professionals who will help to strengthen health systems and enable people everywhere to attain a better health status. The vision which emerged from Hyderabad helped to sight the path across which the next steps must be taken to move towards this goal. PHFI will work closely with partners across the world to speed up progress along this pathway.

- *The key messages from this conference will also be presented at the Conference on "Strengthening Health Systems Capacity and Leadership in the Global South" in Bellagio (Bellagio, October 2008), Global Ministerial Forum on Research for Health (Bamako, November 2008) and 12th World Congress on Public Health (Istanbul, April 2009).*

K. Srinath Reddy
President
Public Health Foundation of India

Contents

Mapping New Territory for Public Health Education in Low and Middle Income Countries (LMIC): Purpose, Process and Products of the Conference

This Conference brought together participants and experts across countries and disciplines to map, understand and recommend optimal and context-relevant interventions in public health capacity-building that would affect outcomes at all levels of the health system. It aimed specifically to address the challenges of evolving innovative, trans-disciplinary and problem solving curricula in public health for a diverse and complex health workforce; and to design the desired characteristics of relevant resource sensitive public health institutions and networks which can advance the agenda of public health in LMIC. The timing and agenda of this Conference are critical, in the context of rapid health transitions in LMIC and speedily evolving concepts on the manner in which public health education must be reconfigured to meet societal needs. The Conference objectives were aligned with a growing global focus and national concern to strengthen health systems as low and middle income countries are passing through a critical phase in epidemiological, demographic and socioeconomic trajectories. These emerging elements of a new public health agenda underscore the need to plan and effect focused interventions to impact upon health systems capacity building by designing the curricular framework that can best fit that agenda. This Conference, therefore, was intended to impart focused momentum to identify the strategic pathways to effect health systems capacity building through relevant public health education.

Through mapping of existing resources and challenges through curriculum scans, background papers and case studies across countries and regions, the pre-Conference efforts enabled a landscaping of the current status in public health education and facilitated a preliminary profiling of its needs and its context.

This Conference aimed not only to generate new learning but also served to initiate a multilevel and plural dialogue so as to gradually build up networks and identify strong partnerships towards south-south cooperation, whereby LMIC public health schools, networks and stakeholders can regularly share experiences, transfer best practices, caution against replication of failed models, exchange learning resources and, wherever feasible, strengthen academic programmes through inter-institutional

faculty exchange and promote joint research. PHFI tried to engage with and reach out to a mix of well established, recently set up and newly emerging schools, located in a diversity of LMIC that enabled the consultation processes to draw upon both accumulated experiences and aspirational plans. The participants were drawn from a wide range of stakeholders — national and international academics and experts from public health schools and related institutions; practitioners, private stakeholders and global health agencies, NGOs and research foundations including the Rockefeller Foundation, WHO, Wellcome Trust, IDRC, USHHS as well as national and state government policymakers in India, who have reinforced the significance of the Conference agenda. PHFI looks forward to prioritizing this agenda of designing public health education to meet health system needs and hopes to move forward to set a meaningful and impactful agenda in this area.

The Conference programme featured theme defining plenaries followed by agenda setting working groups. These were aided by background papers (presented in plenaries) and pace setter presentations (which initiated the working group discussions). The deliberations were also informed by regional scans of public health educational programmes and their curricula in different geographical groupings of LMIC.

This report provides a compilation of the background papers and the scans, alongwith summarized narratives of the plenaries and working groups. Recommendations for action, as evolved from the conference and adopted on the final day, as well as a description of the proposed future steps to be taken by PHFI, for follow-up action, are the concluding pieces of this report.

Conference Programme: New Directions for Public Health Education in Low and Middle Income Countries

PROGRAMME FRAMEWORK

AUGUST 11, 2008

- Arrival and Registration of Delegates
- Informal get together & Introduction (Before Dinner)

AUGUST 12, 2008

9:00 am – 9:15 am

Welcome and Opening Remarks by
K. Srinath Reddy,
President, Public Health Foundation of India

9:15 am – 10:45 am

PLENARY I: PUBLIC HEALTH IN THE 21ST CENTURY; DETERMINANTS, DYNAMICS AND DIRECTIONS

Chairs:
Mushtaque Chowdhury,
Dean, James P. Grant School of Public Health, Bangladesh
&
Ilona Kickbusch,
Director, Global Health Programme, Graduate Institute for Development Studies, Switzerland

Chair's Introduction

1) Public Health: Moving Beyond Definitional Debates to Consensus and Collective Action

Speaker: Geoffrey Cannon,
Director of Science and Policy, World Health Policy Forum

2) Configuring Public Health Education to Respond to the Challenge of Implementing Primary Health Care in Decentralised Health Systems

Speaker: **David Sanders,**
Director of School of Public Health, University of the Western Cape, South Africa

3) Problem-solving in Public Health: Improving Connectivity between Health Systems and Public Health Education

Speaker: **Somsak Chunharas,**
Senior Advisor, Department of Health, Ministry of Public Health, Thailand

4) Governance and Resourcing of Public Health: Recognising the Role of Multiple Stakeholders

Speaker: **Devi Sridhar,**
Research Associate, Department of Politics and International Relations, University of Oxford, United Kingdom

- **Discussion**
- **Chair's Summation**

10:45 am – 11:15 am: NUTRITION & ACTIVITY BREAK

11:15 am – 12:45 pm: WORKING GROUPS I to V

- Working Group I: *Methods to promote problem solving and application oriented learning*

Chair: J.P Muliyil,
Principal, Christian Medical College, India

Facilitator: Alvaro Matida
Executive Director of ABRASCO, Brazil

Pace-setter Presentation: Mahesh Maskey,
Chairman, Health Policy Advisory Committee, Ministry of Health & Population, Government of Nepal, Nepal

- Working Group II: *Influencing health through multi-sectoral policies and programmes – How can public health education help to influence the multiple determinants of health?*

Chair: T. Sundararaman,
Executive Director, National Health Systems Resource Centre, India

Facilitator: Bong-Min Yang,
Professor of Economics, School of Public Health, Seoul National University, South Korea

Pace-setter Presentation: Arnab Acharya,
Senior Lecturer, Department of Public Health and Policy, London School of Hygiene and Tropical Medicine, United Kingdom

- Working Group III: *Governance & resourcing of public health: recognising the role of multiple stakeholders*

Chair: Palitha Abeykoon,
WHO SEARO-SEAPHEN, Sri Lanka
Facilitator: Peter Berman,
Lead Economist, Health Nutrition and Population, World Bank
Pace-setter Presentation: H. Sudarshan,
Honorary Secretary, Karuna Trust, India

- Working Group IV: *Agenda-setting for Public Health Education: Engaging stakeholders across the board.*

Chair: Mirai Chatterjee,
Coordinator of Social Security for India's Self-Employed Women's Association, SEWA, India

Facilitator: Pattapong Kessomboon,
Assistant Professor, Department of Community Medicine, Khon Kaen University, Thailand

Pace-setter Presentation: Abhay Shukla,
Joint Convener, SATHI-CEHAT, India

- Working Group V: *Public Health Law, Ethics and Human Rights*

Chair: Madhava Menon,
Member, Commission on Centre-State relations, Government of India, India

Facilitator: Mala Ramanathan,
Additional Professor, Sree Chitra Tirunal Institute for Medical Sciences and Technology, India

Pace-setter Presentation: Richard Daynard, Professor of Law, Northeastern University, United States of America

12:45 pm – 1:30 pm : LUNCH

1.30 pm – 3.00 pm

Plenary II: LEAPFROGGING ICTs FOR PUBLIC HEALTH EDUCATION IN LOW AND MIDDLE INCOME COUNTRIES

Session Coordinator: **Prita Chatoth,**
Global Programs Manager, Interactive Health Network

03:00 pm – 03:30 pm : NUTRITION & ACTIVITY BREAK

06:30 pm – 07:30 pm : Inaugural Ceremony

07:30 pm – 08:30 pm : Cultural programme

08:30 pm Onwards : DINNER

AUGUST 13, 2008

08:30 am – 10:00 am

PLENARY III: CAPACITY BUILDING FOR STRENGTHENING THE DESIGN AND DELIVERY OF PUBLIC HEALTH THROUGH PUBLIC HEALTH EDUCATION

Chairs:
Antonio Ivo de Carvalho,
Dean, National School of Public Health, Oswaldo Cruz Foundation, Brazil
&
Sian Griffiths,
Director, School of Public Health, The Chinese University of Hong Kong, Hong Kong

- **Chair's Introduction**

1) Human Resources for Health: How should Public Health Institutions Assist in Bridging the Gaps?

Speaker: T. Sundararaman,
Executive Director, National Health Systems Resource Centre, India

2) Integrating Public Health Education across Different Levels and Categories of Health Personnel: Balancing the Need for Team-Building with the Need for Specialisation

Speaker: Laura Magana Valladares,
Secretaria Academica, Instituto Nacional de Salud Publica, Mexico

3) Extending the Frontiers: Integrating Public Health Consciousness into Other Academic Programmes

Speaker: Ravi Narayan,
Community Health Advisor, SOCHARA, India

4) Evaluating New Models of Public Health Education: Indicators of Quality, Relevance and Impact on Health Systems

Speaker: Mala Rao,
Director, Indian Institute of Public Health – Hyderabad, India

- **Discussion**
- **Chair's Summation**

10:00 am – 10:30 am

Panel: Environment and Health: A New Mandate for Public Health

Chair: Rainer Sauerborn,
Chair and Director of the Department of Tropical Hygiene and Public Health, Heidelberg University, Germany

10:30 am – 11:00 am : NUTRITION & ACTIVITY BREAK

11:00 am – 01:00 pm : WORKING GROUPS VI to X

- Working Group VI: *Human resources for health: how should public health institutions aim to bridge the gaps?*

Chair: Francis Omaswa,
Former Executive Director, Global Health Workforce Alliance, World Health Organisation

Facilitator: Dan Kaseje,
Vice Chancellor, Tropical Institute of Community Health and Development, Kenya

Pace-setter Presentation: B.S. Garg,
Director, Dr Sushila Nayar School of Public Health & Professor and Head, Department of Community Medicine, Mahatma Gandhi Institute of Medical Sciences, India
&
M. Prakasamma,
Director, Academy of Nursing Studies, India

- **Working Group VII: Evaluating new models of public health education: indicators of quality, relevance and impact on health systems**

Chair: Rainer Sauerborn,
Chair and Director of the Department of Tropical Hygiene and Public Health, Heidelberg University, Germany

Facilitator: Miriam Rabkin,
Director for Development, International Centre for AIDS Care and Treatment Programs, Mailman School of Public Health, Columbia University, United States of America

Pace-setter Presentation: Shahaduz Zaman,
Associate Professor and MPH Coordinator, James P. Grant School of Public Health, Bangladesh

- **Working Group VIII: Integrating Public Health education with other academic programmes**

Chair: Barry Bloom,
Dean, Harvard School of Public Health, United States of America
Facilitator: Lalit Dandona,
Professor of International Health, University of Sydney, Australia
Pace-setter Presentation: Shalini Bharat,
Professor and Dean, School of Health Systems Studies, Tata Institute of Social Sciences, India

- **Working Group IX: Role of international partnerships: South-South collaborations / North-South collaborations**

Chair: Peter Berman,
Lead Economist, Health Nutrition and Population, World Bank
Facilitator: Christopher Orach,
Department Head, Department of Community Health and Behavioural Sciences, Makerere University School of Public Health, Uganda

Pace-setter Presentation: Courtenay Dusenbury,
Director, Sub-Secretariat at Emory University, International Association of National Public Health Institute (IANPHI), USA

&

Narendra Arora, Executive Director, INCLEN, India

- **Working Group X: Building Capacity in Society & Health Research in LMIC**

Chair: Snehendu Kar,
Professor and Programme Chair, Community Health Sciences, UCLA (USA) and Advisor – PHFI, India

&

Thelma Narayan, Public Health Consultant, SOCHARA, India

Discussion Panel: Gita Sen
Professor, Center for Public Policy, IIM Banglore, India

&

Bong-Min Yang
Professor of Economics, School of Public Health , Seoul National University, Korea

&

David Sanders
Director of School of Public Health, University of the Western Cape,

Facilitators: Shailaja Fennel
Lecturer in Development Studies and Fellow of Jesus College, University of Cambridge

&

Tanja Houweling
Comission on Social Determinants on Health, University College London, London

&

Kavita Sivaramakrishnan
Senior Programme Manager, Academic, Public Health Foundtion of India, India

03:30 pm – 04:00 pm : NUTRITION & ACTIVITY BREAK

05:00 pm – 06:00 pm

World Cancer Research Fund (WCRF) Report Launch

Speakers: Geoffrey Cannon & Alan Jackson

AUGUST 14, 2008

08:30 am – 10:15 am

PLENARY IV: PRESENTATION AND DISCUSSION OF WORKING GROUPS I – V RECOMMENDATIONS

Chairs: Alejandro Cravioto
Deputy Executive Director, ICDDR , Bangladesh
&
Richard Cash
Senior Lecturer on International Health, Harvard School of Public Health, United States of America

10:15 am – 10:45 am : NUTRITION & ACTIVITY BREAK

10:45 am – 12:30 pm

PLENARY V: PRESENTATION AND DISCUSSION OF WORKING GROUPS VI – X RECOMMENDATIONS

Chairs: Salim Habayeb,
World Health Organisation Representative to India
&
Gita Sen
Professor, Center for Public Policy, IIM Banglore, India

12:30 pm – 01:00 pm

Valedictory Address: ***"Global efforts to strengthen health systems: role of public health education"*** **:**

Tim Evans,
Assistant Director-General for Information, Evidence and Research, World Health Organisation

Chairs: Kathy Cahill,
Deputy Director, Global Health Strategy, Global Health Programme, The Bill and Melinda Gates Foundation

01:00 pm – 01:30 pm

PLENARY VI: Summary Plenary (Conference Organisers and Principal Sponsors)

01:30 pm – 02:30 pm : LUNCH

02:30 pm Onwards : DEPARTURES

Key Recommendations from the Conference:

- Public health education must amalgamate approaches from core public health disciplines as well as social sciences and ethics, adopting a variety of methods such as quantitative and qualitative, together with skill-building and personal development.
- There is a need for greater integration of public health with other disciplines to make public health truly multi-disciplinary.
- There is a need to redefine social determinants of health research and education priorities by breaking away from dominant paradigms of public health which have paid inadequate attention to them.
- The delivery of public health education and programmes should be by faculty that is grounded in the community, focuses on the audience and looks through the prism of community approaches and health care programmes.
- The challenges of inefficient utilisation of existing health resources, poor health systems performance constraints, management & decision-making and corruption can be countered through good governance and improved decision-making through education and practices.
- Stakeholder-ship in public health and public health education requires re-definition as 'actors' and their scope can be widened by reaching out beyond schools into community and villages. This can be achieved by incorporating contemporary complexities and encouraging innovations in the development of new public health agenda.
- More work is required on the public health education agenda to develop teaching modules in public health law and ethics bringing in a human rights-based perspective. There is a need to locate teaching content and modules within the frameworks of historical usage of law as an instrument for better public health outcomes.

- There is an urgent need to establish a network of public health institutions in LMIC which would reinforce standardisation in evaluation of schools and in bringing together practitioners from diverse disciplines to encourage the public health enterprise.
- Existing indicators for evaluating quality and impact of different education programmes need to be revisited by incorporating of new indicators such as external evaluations, community and advisory boards, students' feedback, and dissemination, transparency and communication. This would, more than evaluating the specific components, help facilitate a dialogue between stakeholders in order to collectively discuss challenges to improve the capacity and quality of public health education.
- Need to develop and pursue effective north-south and south-south partnerships through factors such as frequency and quality of communication, conduct of joint long term projects, exchange of data, stable frameworks and maximum transparency both inside and outside of partnerships.

Background Papers for the Conference

PHFI's mandate through the Conference was to look at global synergies in the agenda for public health education between India and other low and middle income countries. The Conference was a vital occasion to engage with multiple constituencies and stakeholders from LMIC which have, in recent times, undergone similar transitions. The key themes stressed by PHFI's mandate resonate with global changes in thinking and practice engaging in a thrust on health systems connectivity and inter-disciplinarity in public health education agenda.

To address this mandate and build on *new directions for public health education*, PHFI commissioned eight Background Papers to key experts from around the world to write and present on diverse themes on public health education, looking specifically at critical concerns in health systems. The working drafts of these papers were presented at the Conference in the Plenary Sessions between 12th and 14th of August 2008.

The objectives that these Background Papers address are to flag key themes and issues for discussion, including:

- Analysis of current competencies and capacities in components of health systems.
- Planning and envisioning, particularly with regard to role of governing institutions.
- Inter-disciplinarity and roles played by different agencies, actors and stakeholders.
- Synergies and linkages in the different components of health systems.
- Role played by innovation and creative engagement in health systems.

The Synthesis/Summaries of the Background Papers have been compiled in this Report.

Background Paper # 1

Public Health: Moving Beyond Definitional Debates to Consensus and Collective Action

By: **Geoffrey Cannon**, Director of Science and Policy, World Health Policy Forum

Main Discussion Points:

The paper brought forward important issues like why some communities and populations are sick and others well, and how public health can be rationally and reliably improved as well as sustained? In doing so, it questioned public health as a concept, discipline, and a way of being?

The paper outlined a conceptual sketch that defined public health in a form, relevant to the 21st century principles and priorities. The rapid global transitions have led to debates on reconsidering the nature, meaning and purpose of public health.

Two critical changes have been seen to impact and reshape public health teaching and practices — ***urbanization***, seen for a majority of LMIC nations (India, many African nations and some Latin American Nations), and ***globalization***, which has been seen to sharply increase material and other inequalities. Critical public health issues have varied in nature and severity with regard to time and place, but cannot be understood in local or national isolation.

Public health awareness and reform were historically led by William Cobbett and Rudolf Virchow, and brought forth some major characteristics/values. These included a focus on economic, social and environmental determinants of health; alliances between visionary and courageous reformers; and, a focus on the general improvement of conditions of work and life to bring about a reduction in epidemics and an improvement in health. The development of public health has benefited from declarations and debates, from conferences and workshops – all of which have built the foundation and consensus on evidence and action. These include the Bellagio Declaration (2001), which stressed on the implications of a rise in chronic diseases in LMIC; the Indaba Declaration (2002) at Johannesburg, which focused on the relationship between food, nutrition and health to development; and the Giessen Declaration in Germany which was presented at Durban (2005) to establish the four-dimensional interaction of biological-social-environmental and economic disciplines.

The common themes from these declarations have been the need to put technical subjects in policy contexts, course to work together in concert, and to construct & maintain alliances with leaders in government, civil society, industry, the media and other professions, at all levels, restoring the classical concept of public health.

While the role of the medical and other health professionals in the diagnosis, treatment and care of disorders and diseases have remained fundamental, all relevant professionals inside and outside the medical and health professions need to have competent knowledge of public health and to build this knowledge into their work. Public health teachers and practitioners need to be concerned not only with diseases, but with their underlying (basic economic, social, and environmental) causes, which are the contextual drivers and factors.

Key messages conveyed by the paper were:

- Public health can be taught and practiced with greatest success after an agreement has been made on its meaning and scope, its determinants and on what is required to improve and maintain population health and well-being.

- The most promising new directions in public health will spring from an agreement on what creates and maintains good population health and well being.

- Public health for all must be concerned with the most elemental and fundamental human needs, lack of which create misery, the consequences of which may also be disease.

- A global perspective seen from low and middle income countries is different from that of high income countries, although the main problems are universal. The global problems include insecurity, inequity, isolation, ignorance, exploitation, wars and violence, population increase, climate change, abuse of natural resources and despoliation of the living and physical world.

- The main challenge confronting the public health professionals is much the same as those confronting everyone in relation to public policy issues.

Background Paper # 2

Configuring Public Health Education to Respond to the Challenge of Implementing Primary Health Care in Decentralised Health Systems

By: **David Sanders**, Director of School of Public Health, University of the Western Cape, South Africa & Lucy Alexander, Academic Coordinator, Postgraduate programme, School of Public Health, University of the Western Cape, South Africa

Main Discussion Points:

The paper discussed public health education challenges for the implementation of primary health care in decentralized health systems. The PCH Approach (PCHA), evolved during 1970s adopted an explicit health services focus underpinned by a strong socio-political orientation and influenced by the tenets of social justice. This is also manifest in the principle of universal accessibility and coverage which is need-based and comprehensive with emphasis on disease prevention and health promotion, community and individual involvement, self-reliance, inter-sectoral action for health and appropriate technology and cost-effectiveness in relation to available resources.

The Alma Ata Declaration has affirmed the importance of the social determinants of health and their shaping by the global economic environment and this is evident in its call for a New International Economic Order. Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology, universally acceptable to individuals and families in the community with their full participation and at a sustainable cost which is in the spirit of self-reliance and self-determination, in order to eliminate inequalities and disparities.

Some of the challenges of implementing PHCs in decentralized systems include:

- Development of comprehensive programmes integrated into decentralized services to bring about transformation of both management systems and practices.
- Dealing with hazards of decentralising health systems without simultaneous development of district health capacity.
- Challenges from limitations of adopting traditional public health curricula which had historically been aimed at the more specialised roles of epidemiologist, health economist and policy makers – leading to emphasis on institution-based teaching

and inadequate direct field experience, as well as the lack of public health practitioners as role models and the absence of apprenticeship experience.

Decentralization has implications for differentiating the public health curriculum — there is the additional imperative to provide access to a wider range of health professionals than traditionally encouraged and whose qualifications are notched at levels lower than medical doctors. The concept of competencies implies application within a context, and therefore the knowledge base needs to be derived from a thorough investigation of the local context and in the era of globalization, also through global social and economic context. Therefore the challenge for public health education planners is to ensure that health professionals are able to study the contexts of their practices.

Some examples of good practices illustrate the importance of curriculum design for primary health care delivery in a decentralized health system and offer solutions to some logistical and financial challenges. The Ghana Strengthening District Health Systems Initiative (SDHS) was a programme aimed at improving management at decentralized levels. The Nkwanta District Team from the remote Upper Volta area, who attended capacity development at the Navrongo Health Research Centre identified their learning needs in the course of training; and decided to adopt the successful service delivery model of the Navrongo District, deploying community health nurses to live in particular remote communities. These examples imply that health service departments for decentralized situations might be well served by combining some generic problem-solving and strategy-based training with in-service organizational development, as well as involvement of personnel in honing local solutions.

The School of Public Health (SOPH) at University of the Western Cape (UWC), South Africa has developed a curriculum which is delivered in a distance-learning environment, interspersed with regular, but optional contact sessions with the student based on the situation of learning.

The paper argues that decentralization of health systems organization and management has significantly increased the need for a greater range of substantive public health skills, and hence it has greatly increased the number of potential candidates for Public Health Education. This challenge can be met by strengthening the capacity of educational institutions in the "periphery", and also by employing innovative approaches that combine residential teaching with applied practice, supported by appropriate learning media and material.

Background Paper # 3

Problem-solving in Public Health: Improving Connectivity between Health Systems and Public Health Education

By: **Somsak Chunharas**, Senior Advisor, Ministry of Public Health, Thailand

Main Discussion Points

The paper focused on aspects of problem-solving in public health by improving connectivity between health system and public health education. The four main phases through which the practice and science of public health has evolved over time include:

a. Classical Public Health: public health concerns and actions dealing with outbreak control.

b. Health programme planning and management: studies of public health that include 'managerial dimension' in addition to technical aspect.

c. Community participation: the introduction of primary health care as a global strategy to achieve health for all

d. Health promotion and new public health: continuation through the Ottawa Charter on Health Promotion, highlighting the need for public policy to address social determinants of health and rise of NCDs & the changing demographic profile.

To stimulate and bring forth innovation and new knowledge in public health, the paper considered two key assumptions. One, that innovations rooted or closely linked with those who are working in the health system have more chances of being implemented compared to those introduced or imposed by external agencies; and, second that the process is more important than results, implying that innovation implemented or introduced will need to be improved upon through continuous learning of those in the system or other groups closely linked to the system. Most public and private health systems have limitations in continuous learning and improving public health interventions through human resource capacity and development and system design & organizational management, and these would provide entry points for more effective public health.

There are however limitations in conventional health sciences education with regard to limited exposure of learning experiences in population-based concepts and

approaches which form the foundation of public health concept. In many health systems in LMIC, auxiliary health personnel have been trained and deployed only at the peripheral levels of the health system. The organizational design and management is mainly geared towards the 'expressed demand' for health services and care (curative aspects). Constant exposure to people's health needs and demands puts pressure on health personnel and management, and would require abilities to learn and adapt for an effective balance between the demand and supply sides of health development. The new public health education will need to meet three challenges — imparting a holistic conceptual framework and conceptualizing skills, creating a sense of leadership, and the ability to learn from various sources and through diverse channels of knowledge.

The learning health system forms an essential component of the new public health education, and is vital for linking sources of new knowledge and innovation. The application of new knowledge for programme development and implementation is vital for active programme implementation environment and atmosphere. Further, health information services and the use of information & data derived from the system must have attributes of accuracy, completeness and timeliness. Continuous quality improvement (CQI) is another aspect that is essential for dynamic working process and innovation within any organization. Developing routine to research back to routine (R2R2R) would provide opportunity to utilize health records and data in order to provide continuity of care.

Connecting the health system and public health education is essential for good public health, regardless of whether the schools of public health are part of the administration of the Ministries of Health. Some strategies which are a key to this include improving content and teaching-learning processes and creating better linkages with the health system and other related faculties, in order to develop partnerships. Understanding policy analysis and policy processes would help public health workers to see the larger picture, especially how to influence as well as link their respective roles to the socio-economic environment affecting public health actions for utilizing knowledge for change and development.

The development of the health system for good public health education can take place through a district health system where essential public health functions are carried out along with basic curative services. It should be the mandate of educational institutes to strengthen public health services and its related system as a part of its

educational system development. It is therefore important to set as its main educational objective the ability to learn and innovate rather than a set of fixed health problems and solutions.

Background Paper # 4

Governance and Resourcing of Public Health: Recognising the Role of Multiple Stakeholders

By: **Devi Sridhar**, Research Associate, Department of Politics and International Relations, University of Oxford, United Kingdom

Main Discussion Points

The paper outlined key issues in the governance and resourcing of public health such as trends in the financing of public health, the diverse stakeholders, key debates as well as the way forward and implications for public health. The role of external agencies in financing health in LMIC must be recognized, especially in relation to government as a major player. The paper estimated that global health donors account for approximately 0.3% of total expenditures on health - 1.3% in non-OECD countries and 6.5% in Sub-Saharan Africa. Many health ministries have become 'donor-dependent' and vulnerable to the influence of donor priorities.

Two major trends in global health financing have been prevalent over the past 10 years – the contradictions between the rhetoric of horizontal interventions with the reality of vertical programmes, and the transition from multilateral to bilateral forms of aid. Horizontal interventions play a major role in strengthening the primary care system, improving health system services and addressing general non-disease specific problems such as health worker shortages and inadequate skill birth attendants. The increases in finance have been directed to address HIV/AIDS, malaria and TB. An important concern in certain aid-dependent countries such Zimbabwe has been decrease in investments in primary care and health systems as scarce financial and human resources are directed towards HIV/AIDS.

Global health governance has emerged as a new and expanding interdisciplinary research area integrating research from diverse arenas such as medicine, international

relations, public policy, economics, law and sociology. It refers to the interactions between formal and informal institutions, facilitation of norms and processes which govern or directly influence global health policy and outcomes. Three notable trends in global health governance, which are particularly unique to this area are financing in global health, the continuous expansion in the number as well as types of actors involved, and the continuous expansion of the policy discourse in the territory of health.

Various actors are seen to play a major role in policy-making in global health, especially in aspects of resourcing and governance. These include ***multilateral institutions*** such as the WHO, UNICEF, UNAIDS, UNFPA and the World Bank; ***national aid agencies*** (including bilateral aid departments) like DfID and GTZ; ***non-governmental organizations*** and networks, such as the People's Health Movement and Oxfam GB; ***private foundations***, such as the Bill and Melinda Gates Foundation (BMGF); and the ***private sector***, having proven to be important players in global health.

The paper also discussed three major debates and challenges in financing and governance which include the proliferation of initiatives (including shifting attention between diseases without working to build long term national capacity), donor influences on priority setting without the lack of accountability (lack of alignment and harmonization in 'technical assistance' without monitoring and reporting on their own governance), and sustainability of levels and type of financing (who should be funded, where and what should be funded).

Hence the paper asserted that an understanding of the politics of health is integral to understanding how the system works. Public health education should include these issues, as students must recognize that evidence is just one input in policy and government is just one player in governance. Some of the promising ways forward include strengthening the mechanisms of accounting, developing national plans and leadership and exploring greater south-south collaborations.

Background Paper # 5

Integrating Public Health Education across Different Levels and Categories of Health Personnel: Balancing the Need for Team-Building with the Need for Specialisation

By: **Laura Magana Valladares**, Secretaria Academica, Instituto Nacional de Salud Publica, Mexico

Main Discussion Points

The paper discussed that improvements in public health depend to a large extent on the quality and preparedness of the health workforce, which is in turn dependent on the relevance and quality of its education and training. Developing countries today are in diverse stages of reforming the health sector and responding to the population health challenges. The redefinition of essential public health functions to attain the millennium health goals have introduced determinants of great importance to priorities in health system, to which health worker competencies are crucial.

Health workforce models must define all dimensions including the specific profession (the worker), work setting and the focus of concern or the work itself. Regarding the worker, there are often vast differences in qualifications, experience, education, and training among the different public health workers as well as other personnel affecting health who have no specialized public health training at all. The work-setting includes both government and non-government arenas where health-related activities occur. The focus of concern or work includes identification of community health problems, mobilizing community partnerships to identify and solve health problems, enforcing laws and regulation that protect health care workforce, assuring a competent public health and personal health care workforce and researching on new insights and innovative solutions to health problems. A major challenge for designing effective strategies is with regard to training the workforce in improving information systems in order to identify personnel, update occupational profiles and describe the competencies required for performing the work.

The paper discussed competencies as a cluster of related knowledge, skills and attitudes that affect a major part of the work, correlate with performance at work, are measured against accepted standards and can be improved via training and development. Competency based training is essential to match professional education with the

practical needs of the public health. In 2003, the Institute of Medicine reported a lack of coordination between public health schools and local or government public health agencies that could provide students with the practical background to direct their studies and to better serve as future public health functionaries. The primary weaknesses of schools and institutions include difficulties in assuming new challenges, adopting new paradigms and aligning their educational options with national and global needs.

To adequately confront the great challenges facing public health professionals, training programs need to have a holistic understanding of health that emphasizes connections and relations among multiple determinants of health in an ecological perspective. Competencies must integrate the basic areas of public health, including not only epidemiology and biostatistics but also social sciences, environment health and health administration & systems, with a strong emphasis on prevention and primary care. The importance of learning cross-cutting competencies is based on the need to respond to the changes that are continually being generated within the sector.

The discussion and challenges include urgent action to define who is to be considered public health personnel according to new and evolving competencies. Schools of public health need to update their programmes to include emerging professional needs, cross-cutting competencies and an ecological approach that gives priority to prevention, health promotion and primary health care. There is also a need to revise existing pedagogical practices, to include case-studies, problem based and collaborative learning, as well as national continuing education systems collaborating with academia, to update and train the entire workforce in professional and cross-cutting competencies and performance evaluation.

Some of the linkages which can complete the list of needed competencies include analytic/assessment skills, policy development and programme planning skills, cultural competency skills, financial planning & management skills, and leadership & system thinking skills.

Background Paper # 6

Extending the Frontiers: Integrating Public Health Consciousness into Other Academic Programmes

By: **Ravi Narayan**, Community Health Advisor, SOCHARA, India

Main Discussion Points

The paper highlighted aspects of integrating the bio-medical framework with a focus on disease control and environmental hygiene, to a more broad-based and comprehensive engagement with the social, economic, political, cultural and ecological determinants of health. So far, those in public health policy, research and activism have offered a new and complementary framework for the expansion of public health consciousness in society and the dynamic context in which it needs to be researched and promoted. Hence there is a need to address larger challenges that go beyond the public health academic, research and operational systems to the larger academic, research and policy community.

The paper explored the areas of expanding frontiers by classifying disciplines and opportunities into four broad groups. These include expanding public health consciousness at school levels (primary to secondary education), building public health consciousness in the medical & health fraternity, building frontiers in social science programmes related to health and expanding frontiers in non-medical programmes.

Public health programmes and modules at school levels need to be participatory and action-oriented to make learning interesting. These programmes need to be incorporated through teacher training through various teaching programmes. The tradeoff is likely to be not only better health behaviour but also healthy citizenship and the understanding of public health laws, regulations and public health systems that strengthen the societal and collective dimensions of action.

It has been realised and recommended that health professionals irrespective of their specialization or interest must have public health consciousness and an understanding of the community and social determinants of health. The National Health Policy for Health Sciences (drafted 1986) recommended the 'need for a major transformation of education so as to make it more humanistic, nationally relevant and socially committed', emphasizing on a holistic approach covering promotion, preventive, curative, and rehabilitative aspect of medicine.

There has been a thrust on interdisciplinary approaches in public health especially linked to the social sciences, through the increasing recognition of social, economic, political, and cultural determinants of health and public health challenges and the same multidimensional framework for system building as well as through the recognition of partnerships at various levels. These are likely to facilitate and foster the dialogue between social sciences and public health, through bilateral flows between the streams.

Interdisciplinarity and exchange would also be facilitated between other disciplines such as engineering, law and agriculture to evolve a community context for public health system implications to deal with emerging public health problems. These have been recommended by the Bhore Committee, as well as have been realised over the course of development of policy-making such as for law, agriculture and management through trade agreements, management concerns and programmes, etc.

Some general principles for application to these courses include encouraging alternative pedagogies, new paradigms and new partnerships – termed as new public health, and seeking resonance with the broader determinants of public health, questioning previous orthodox and reductionist approaches. Alternative institutions, both organized and informal, have been actively involved in this capacity building and include networks of community health trainers such as People's Health Movement, Society for Community Health Awareness, Research and Action (CHC) and the Centre for Enquiry into Health and Alternatives (CEHAT).

The way forward in the integration of public health consciousness with other academic programmes would include a review of programmes and approaches with a focus on experiences, systematic interdisciplinary dialogue oriented to policy and practice in order to reorient short and longer-duration courses, and development of public health systems to strengthen national and global efforts for the goals of equity and social justice.

Background Paper # 7

Evaluating New Models of Public Health Education: Indicators of Quality, Relevance and Impact on Health Systems

By: **Mala Rao**, Director, Indian Institute of Public Health – Hyderabad, India

Main Discussion Points

The paper described a new framework for public health training and education which has been recently established in the UK. The focus of training and education particularly in the context of professional development has been the subject of intense scrutiny in recent times. The paper summarized how a new system had been established to strengthen the public heath competency and skills of the workforce.

The core public health practices have been population-based, emphasizing collective responsibility for health, recognizing the key roles of the state, and having a multi-disciplinary basis which incorporates qualitative as well as quantitative methods. Core activities which make up public health practice have been located within three domains of public health (described by the UK Faculty of Public Health) and include — health improvement, improving health and social care, and health promotion. All these domains are underpinned by a common core set of activities, which take a population perspective, mobilize the organized efforts of society and advocate for improved public health; act on the social, economic, environmental and biological determinants of health and well being; and ensure that preventive, curative and care services are of high quality, based on evidence and of best value. The framework developed in response has been based on a strongly expressed need to strengthen public health training and development in order to achieve an effective workforce.

The framework has evolved four core competency areas that would be common to the entire health workforce. These include surveillance and assessment of the population health and wellbeing, assessment of the evidence of effectiveness of interventions; programs and services to improve population health and wellbeing; policy and strategy development and implementation for population health and wellbeing; and leadership and collaborative working for population health and wellbeing. In addition, five non-core competency areas within which individuals worked principally in the UK have been health improvement, health promotion, public health intelligence, academic public health, and health and social care quality.

The framework has systematized public health competency building strategy at all levels of the workforce. It has also helped to provide a coherent vision across organizations, and a key component of competency driven training and education framework has been to ensure the assessment of a competency assessed system. Part A membership of the faculty examination is intended to test candidates' knowledge and understanding of the scientific bases of public health and their ability to apply their knowledge to the practices of public health. Part B which is an objectively structured public health examination is intended to test the candidates' ability to apply relevant knowledge, skills and attitudes to the practices of public health. Also important is the need to recognize the strengths and effectiveness of multi-disciplinary public health workforce.

The ultimate objective of public health education must be to measure the specific impact of education in achieving health outcomes. With globalization, many benefits and challenges to public health at the international level have been raised. It is therefore suggested that competency driven and multidisciplinary approaches to public health training and education adopted by the UK may be worthy of consideration in the global context.

Curriculum Scans of Educational Competencies across LMIC's:

In order to meet the expanding mandate of public health, several LMIC have recently initiated efforts to establish schools of public health to build the much required capacity in their health services and to influence the broader public health agenda through multi-sectoral action facilitated by inter-disciplinary research.

These recently established and freshly emerging schools of public health in LMIC offer hope for steering public health education and strengthening public health systems in consonance with the new mandate of public health. However, it is imperative that the curriculum of these schools is appropriately configured, retaining the core strengths of the 'classic' public health training programmes but adding on several new components which are relevant to the new public health agenda. The learning settings and pedagogical methods also need to be modified to integrate experiential learning and stakeholder perspectives (by developing relevant linkages with the health services, civil society and policy makers). The purpose, process and products of public health education in LMIC have to be clearly envisioned at the state of inception or early growth to provide the appropriate match to their public health needs. In order to achieve these goals it was felt by the team at PHFI that a critical review of the present structure and curricula of these schools be undertaken in LMIC.

PHFI commissioned and coordinated a scan of curriculum and competencies in the public health education institutions and networks in LMIC. The scan was meant to benchmark existing experiences and practices in public health capacity building in low and middle income settings. The main aim of these scans was to establish the challenges and priorities in capacity building in public health institutions in LMIC and to locate strategic areas for intervention. These scans were led by the PHFI Conference secretariat with desk reviews being carried out by partner academic institutions. The outline, analytical tools and tracers for this scan were framed by a group of technical experts at PHFI, so as to allow effective comparative analyses and understanding of practices and needs in capacity building across diverse contexts and resource settings.

The curriculum scan was conducted by two partner institutions each from four LMIC regions — South Asia, South East Asia, Sub Saharan Africa, Latin America and South America, with each region taking charge of a defined set of countries.

These scans provided a review of existing programmatic frameworks and curricula for public health education in LMIC. They particularly commented on how closely the curriculum and learning methodologies are aligned to the needs of national health systems.

The overall objective of the scans was to trace the processes and changes that inform public health education in terms of strategies, innovations and assumptions rather than capturing merely the effects or outcomes of public health education.

Summary of the Curriculum Scans

South Asia

In recent years, there has been growing popularity of public health in the sub-continent, especially in India. There has been a spurt in schools that are providing public health programmes/courses. However, many of these programmes/courses are geared towards the private sector and are oriented towards training students for the national and international NGO market. Very few training courses specifically target government health sector staff within the national and state health systems.

While the common courses offered are DPH, MPH and MD Community Medicine, there are also stand alone courses on Epidemiology, Veterinary Public Health, Health Education, Statistics, Industrial Health, Nutrition etc. Most of these stand-alone courses are for in-service candidates ensuring professional development of the staff in the public sector. What is however required are more general public health courses as well as PhD courses in specialized topics like health economics, medical anthropology, medical sociology etc, which are not very well developed in these countries. Addressing this lacuna is crucial for the development of a cadre of teachers who can then lead the public health movement.

In India, until recently, there were no MPH courses at all, and those that exist today have been launched in the past few years (the oldest one was launched in 1997 and the youngest six in 2008). A total of 138 public health courses exist in the country offered by 90 institutions. Findings of the scan indicate that most of these are in the public sector, though there has been a recent influx of private sector players. Most of the DPH courses are housed in medical colleges. While the older ones mainly target in-service candidates, the newer courses permit fresh graduates to apply. Pakistan currently has five public health programmes which are also mainly targeted towards medical and dental professionals.

Some schools in India and Nepal have been active members of various public health networks such as the South East Asian Public Health Education Institutes Network (SEAPHEIN) and the Asia Pacific Academic Consortium for Public Health (APACPH) both of which promote south-south engagement.

In India, Pakistan and Nepal, field work is an important component of developed decision making, problem solving, teaching, leadership, programme management and evaluation skills. However, low levels of research and publications in peer reviewed journals are other lacunae in the Indian scenario.

Most of the courses are full time and require the students to attend class for the entire duration. This is a major bottle neck in the production of public health professionals in these countries. Class room teaching with fixed intake of students is a hindrance in meeting the public health needs of India, Nepal or Pakistan. This opens doors for more distance education courses; be it the classical paper based or e-learning modules.

Public Health in Bangladesh is a descendant of the legacy from Pakistan and India prior to the liberation war as well as the division of the Indian sub continent. Different institutions in Bangladesh providing Public Health Education and related knowledge and skills cover the basic courses in their respective curriculum such as Epidemiology, Biostatistics, and Research Methodology; these institutions can be divided into public academic institute, public research institutes, private academic institutes, NGOs and private research institutes.

From the liberation war up to 2000, the Government of Bangladesh has been the only player in producing public health practitioners through the National Institute of Preventive and Social Medicine (NIPSOM). However from 2001, the private sector has stepped in and has been expanding its different programs centred on public health academia and research. Compared to the public sector, the private sector is accelerating in scaling up of capacities in public health education and training in Bangladesh, especially through inter-institute collaboration and short courses through the year.

Missing links and gaps can be identified within the growing public health system in Bangladesh, the weaknesses and strengths of which are being shared between the public and private sector. While public health professionals are usually produced by the government public health institutes, the relevance of education to the existing need of the country is generally addressed by the private sector. Moreover, the career path of graduates from private universities has been seen to imbibe greater diversity in comparison with those from the public sector, and this has also ensured wide coverage of different sectors in public health by graduates from the private sectors. Innovative approaches in problem based learning strategies applied by the private

sector trainers, such as the James P grant School of Public Health (JPGSPH)(BRAC University) has been combined with strategies for the utilization of practical fields as social laboratory. Also related to this is the question of job markets as graduates from public sectors have largely been seen to be returning to their government jobs and face limited scope to practice public health as opposed to public health graduates from private sectors who have been serving an array of institutions related to public health and development.

Private sectors have been successful in establishing South-South collaborations through different activities, such as recruiting students, inviting faculty members and research. The curriculum of both the public and private sectors cover basic courses relevant to public health education such as Epidemiology, Biostatistics, Research Methods as basic courses. However, no one single institute covers all the public health problem of the entire country. None of these public health curricula cover the roles played by traditional medicine, although James P Grant School of Public Health discusses traditional medicine and healers in its programme on Medical Anthropology.

In terms of building new curriculum, teaching/learning methodologies and faculty development, the private sector capitalizes on the feedback from students about the courses and faculty members. Moreover, the faculty members are also asked to reflect on the classes, course modules and students. A combined feedback is then analyzed which culminates into recommendations for better curriculum design in the future. The issue of faculty development is also seen to evolve into an organic process of support for higher education as well as recruitment of the institutes' own graduates.

The existing public health education in Bangladesh is improving gradually to reach high quality. Considering the amount of time that has passed since the private sector has started public health education, the acceleration is enormous. One very important weakness that still needs to be worked on is the number of public health professionals produced within a given period of time. Some of the institutes would have to increase their intake through means including other tailored programs.

Another important feature that is lacking in all but one; i.e. JPGSPH, Public Health Education institution is the exposure to problem based learning. The lack of this implies that the students from all these institutes, regardless of private and public, do not get the essence of the reality during their education. A shortage of trained faculty in specialized subjects is another drawback of the existing public health education in

Bangladesh. Particularly for higher education, Bangladesh still depends on the education from the North.

Sri Lanka does not have separate institutions offering post graduate education in Public Health. The Board of Study in Community Medicine is responsible for all postgraduate training programs in Community Medicine.

Since 1992, the Board of Study in Sri Lanka has undertaken training specialists in Community Dentistry and included MSc in Community Dentistry and MD in Community Dentistry. On an average 20-25 students complete the MSc program successfully with 2-5 trainees completing the MSc in Community Dentistry program. The number qualifying MD Community Medicine varies widely, ranging from 4-15 per year. Periodic reviews of the training programs and appropriate modifications are made to improve the quality of training, in keeping with the changing needs.

Inadequate logistic support and financial support pose many limitations in further development and implementation of public health training programs. There is a lack of formal networking system where program examiners/ resource persons could be developed. The overseas training component needs to be streamlined through the establishment of linkages between institutions.

China

Prior to 1949 (before the People's Republic of China was established), there were almost no specific schools to train public health professionals, and a small number trained in US, UK, Japan or other countries. During this period, some clinical training schools developed community medicine curriculum to control infectious diseases.

During the period 1950-1977, the model of public health education in China, following the former Soviet Union Model in 1950s, established 7 medical colleges which grew to over 30 colleges in 1970s. Disease prevention institutions at all levels were established. Institutions for disease prevention and control were set up at different levels all over the country and developed with the numbers increasing from 10 to more than 2500. The Department of Preventive Medicine was developed in both

secondary education schools and medical college, with 3 and 5-6 years' study circulation respectively, and courses for preventive medicine students including basic, clinical and preventive medicine.

In 1978, China began to carry out economic reforms and open-door policies which strengthened the partnership with other countries. The number of students studying abroad increased while greater numbers of foreign experts were employed as full-time or part-time staff or invited as visiting faculty to China. The size of medical schools and colleges increased over time and public health-related subjects were encouraged in about 60 universities which included streams like preventive medicine, maternal and child health, health management, medical laboratory test and so forth through diverse degrees such as diploma, bachelor, master's degree and PhD.

To stop the spread of SARS in 2003, a large-scale public health intervention was launched worldwide, which expedited the disease prevention system's development in China and also accelerated Chinese innovation in public health education. From then on, training comprehensive, high-level talent person became the main focus of public health education. Courses such as anthropology, social science, management, economy, laws, ethnics, and so on have been taught in medical schools; new teaching methods such as interdisciplinary courses, problem based learning and field work practice were used in the whole process of teaching. From 2002, Master of public health (MPH) was started in 22 universities to train public health professionals at high level.

Public health professionals are mainly trained in medical university, but still about 10% of them graduate with non-medical degree. The training model has no change radically comparing to the original model — 5-year's education: including 3.5-4 years' basic and clinical medicine courses, 1-1.5 years' public health courses. In addition, there are MS and PhD's training programs.

Now there is a population of 250,000 professionals for diseases control and sanitation supervisory professionals. Nearly 70 universities or medical colleges own public health departments and about 6000 graduates get bachelor's degree, 1000 graduates get master's or doctor's degree and 1500 graduates get MPH every year.

South East Asia

Public Health Education in Vietnam:

Due to emerging Public Health problems in the country, during this period of a health transition and health system reform, there is a growing demand for a qualified health workforce, particularly Public Health professionals within different levels of Public Health system (central, provincial, district and commune levels) and in both government and private sectors.

There are various training programs using old approaches in addressing public health problems. There are still existing training programs (undergraduate and graduate to train medical doctors working in preventive medicine) using traditional teaching methodologies of passive and classroom based training. No standardized curriculum in graduate public health training programs exists in the country.

Training capacity including training facilities (Public Health lab, field training system) and teaching staff is still limited in terms of number and quality. Since modern public health training has recently been introduced in Viet Nam, the investment on development training facilities from Government is still limited. In addition to that, the newly developed training institutions may not have adequate experiences in developing training. Due to limited training capacity in different parts of the country, there are not many intuitions able to provide comprehensive training programs as BPH, MPH and doctoral degrees in Public Health.

Public Health training curricula in the country are mainly generic with limited flexibility. Although a practical component has been embedded in some MPH programs, the interaction and effective application of field training into local context and vice versa is still limited.

The BPH training program is more emphasized on theory with limited field work, and there is some imbalance between subjects. There is not enough emphasis in several groups of subjects relating to basic medical sciences, such as pathology, common diseases at the community, microbiology and parasitology, as well as some basic computer skills and management.

Non-degree short training programs to support career path development and continuing training of the working staff are not widely available nor are they included in the teaching agenda of almost all Public Health training institutions in the country.

Despite the growing acceptance of the role of public health professionals, the status of the profession is still hampered to some degree by the treatment orientation of clinicians and historical approaches to public health. This leads to the situation that there is not a clear and adequate policy on public health training and development from the Ministry of Health. These may also serve as barriers to recruitment of Public Health candidates for Public Health training programs and consequently limit the development of the Public Health workforce for the country. The job description for health workers is not clear, therefore, the assignment and monitoring of work and also for designing proper training programs are facing enormous difficulties. Collaboration between institutions in the country as well as interaction between academic institutions and public health practices are still limited.

Salary and incentive packages for teaching staff are low. In reality, many well trained teachers are leaving public academic institutions mainly due to growing competitive incentives from private public health practice (local and international NGOs).

The Ministry of Education has set forth regulations and roadmap for verifying quality of training to ensure consistent training quality in all universities throughout the country. However, no health science university implements the regulation for verifying training quality and lack of systematic research on the evaluation of graduate performance impacts.

Although there has been some effort to improve the quality and applicability of newly developed PH training programs in some institutions through research, there is still a lack of research for PH training program development and application.

Public Health Education in Thailand:

The health care infrastructures have been developed and expanded throughout the geographical areas for more than forty years. Different types of human resource for health (HRH) have been developed to suit its circumstances. HRH production in the early phase was mostly focused on the para-medical personnel who can work in rural areas.

The Ministry of Public Health (MOPH) produces most of the certificate level HRH for its own facilities, whereas University Faculty of Medicine, Faculty of Nursing etc. produce graduates with Bachelor degrees. Although the establishment of the first Faculty of Public Health at Mahidol University might be the first movement of career differentiation for Public Health profession, in reality the HRH who are functioning as Public Health administrators are mostly medical doctors with or without Public Health education. On the job training and special short courses organized by various Institutions and MOPH Departments are the key mechanisms for strengthening HRH in Public Health.

The trends in establishment of graduate study in Public Health either MSc or MPH and PhD have strengthened the Public Health professions. The graduate MPH or similar programmes are provided by many University Faculties of Medicine and Faculties of Public Health. It should be noted that Faculty of Pharmacy and Faculty of Nursing are also providing the similar graduate PH programmes.

The career paths for those with special interests in Public Health are health administrators at district, provincial, regional and central offices. The newly established Public Health organizations such as the Thai Health Promotion Foundation, the National Health Security Office, the National Health Commission signal a huge demand for HRH in Public Health. The Praboromanajchamok HRH Institute is the focal point for HRH planning in Thailand. However, the complexity of HRH issues and related organizations make it so difficult to make a well and accepted HRH plan.

There is no standard for the design of the public health curriculum. However, it can be seen that a common feature are the ones with core and elective courses two-year programme. Thesis (or sometimes called dissertation is a requirement for graduation. Subject areas for the core courses are mainly focused on the Basic principles of Public Health, Epidemiology, Biostatistics, Computer skills, Management, Health Promotion, Environmental Health, Occupational Health, Social Sciences applied to Health, Health Policy and Health Laws. The elective courses include many subjects mostly related to special expertise of staff.

Cooperation between various university based departments and the MOPH in designing and implementing a module-based graduate Public Health programmes is becoming popular. Using real life experiences and existing health system problems as starting points for learning and project based study are key teaching and learning

strategies. Supports from the Thailand Research Fund Golden Jubilee PhD programme and the Health Systems Research Institute are also key mechanisms to enhance the productivity and quality of the graduate Public Health study.

There is an increasing trend of educational quality assurance activities particularly for University based programmes such as the Thailand Quality Award movements and a requirement for staff to publish papers in the peer review international standard journals.

Public Health Education in Singapore:

Human resources for health in Singapore are mostly those with high degree of education. Public health education is mainly organized at the graduate level for those with medical and para-medical backgrounds. Its educational standards are as high as of the developed world. The Master in Public Health Programme is provided by the National University of Singapore's Department of Community, Occupational and Family Medicine. The structure of the curriculum characterizes core and elective courses. The core courses consist of Public Health Biology and Ethics, Principles of Epidemiology, Biostatistics and Information, Behaviours in health and diseases, Health care and policy, Environment in health and diseases. The elective courses are organized to serve the specific career needs of students. A practicum is also typically required.

The high educational quality stems from the highly qualified staff and course management. Mechanisms to ensure educational quality, such as the use of external examiners, are also in place. Publications in high impact factors journals and staff consultation services to health ministries of neighbouring countries reiterate this.

Latin America

Health system reforms in Latin America and the Caribbean have been responding since the 1990s to problems concerning accessing services, scarce and unequal access to resources, and efficiency and quality of services. The participation of public health

personnel in these reforms is crucial to their responsiveness to current needs in the region; thus, the study of public health workers has become a high priority. This report identifies the characteristics of academic and training programs in public health, evaluates their relevance to current health system needs in the region, analyzes labour market conditions, and offers recommendations for improving the capacity of health human resources to participate in system reforms.

The regional scan for Latin America was based on secondary and primary sources, including documents, online research, and direct telephone requests for information from institutions. The countries consulted were: Costa Rica, El Salvador, Guatemala, Mexico, Venezuela, Ecuador, Jamaica, Honduras, the Dominican Republic, Colombia, Cuba, Panama, and Nicaragua. Some of the main issues discussed include: modifying academic programs in public health to meet the specific needs of health systems, particularly the new epidemiological profiles common among countries, with a focus on prevention and promotion; making programs accessible and relevant-using a competency-based model, innovative teaching methodologies, and flexible formats for working professionals; improving use of information technologies to provide better information on the labour market, broadening the definition of healthcare workers, and developing consistent indicators.

Findings include: Of those institutions providing information, 58 offer master's degrees and nine doctorate degrees, with new programs continually being developed. Some master's programs include an ecological approach to health, with an emphasis on health promotion and primary care; a high percentage are currently being redesigned to include competency-based models based on the Essential Public Health Functions recommended by international organizations. Educational innovation was observed, including use of active and collaborative learning, Problem-Based Learning (PBL), and case studies. In addition, most of the institutions that reported their educational formats offer full-time face-to-face programs (40%), 22.22% offer part-time face-to-face, 15.5% use different formats depending on the program, and 4.45% use an online format exclusively. Many institutions have broadened access to professionals in fields such as social, administrative, and environmental sciences. Although few institutions in the region report having systematic continuing education programs that meet the needs outlined by ministries of health, continuing education has become a core action in the region for the training and updating of professionals who actively work in health systems. With regard to the labour market, precise information is lacking on the total number of health workers and differences exist as to how

those workers are defined. In addition, adverse changes in working conditions have been observed.

Brazil

Together with the National School of Public Health (ENSP/Fiocruz), the Brazilian Association on Collective Health (Abrasco) defined a brief work plan based on the terms of reference of the PHFI' initiative (1). The methodology adopted to conduct the curriculum scan included: (i) the definition and application of a semi-structured questionnaire, with 20 questions on the four scenarios of interest: institutional framework; academic programs; knowledge application; and faculty, staff and students scenario; (ii) the use of select variables from the Database of the Post-Graduation Evaluation System/Minister of Education (CAPES/MEC).

This study was originally planned to make an analysis on the theme for the South American countries and, in this perspective, the designed questionnaire were sent to all of the Public Health (PH) schools and teaching institutions listed in current publications (2) and/or in the data files of Abrasco and the ENSP/Fiocruz. The questionnaire was sent to 88 teaching institutions from 9 South American countries. The shortage of time and the period of vacation of the program directors, among others factors, posed important barriers in the communications for the conduction of this study. The universe of this scan study is the 46 Brazilian Schools and Teaching Institutions on Public Health (STIPH). The results and analyses presented are limited to Brazil, from 2005 to 2006 and are based on the secondary data files, responded questionnaires data and literature review. In this sense, this study must be continued and should be taken with its partiality and limits. In fact, it is a complementary contribution to the ICPHE/PHFI and to the ongoing research evaluation project, sponsored by the Minister of Education and conducted by Abrasco, together with the PH program directors jointed together in the National Forum on PH.

Some results of the scan are summarized below:
From the total of 46 STIPH, 18 (39%) are in the Southeast; 11 (24%) in the Northeast; 9 (20%) in the South; 5 (11%) in the Central East; and 3 (7%) in the North Region of Brazil. Twenty out of 46 STIPH are linked to the Federal Government – University and MOH; 18 belong to the Provincial Government – University and

Provincial Health Department; and 8 are private (MAP 2). All the STIPH have formulated and stated institutional mission, goals and objectives and, taking into account the Post-Graduation Evaluation System/Minister of Education (CAPES/MOC), the 20 STIPH linked to the Federal Government; 06 of the Provincial Government (universities) and 8 private, i.e., 34 (74%) out of the 46 STIPH participate in a National Evaluation Program planned and executed by CAPES/MOE System.

Thirty four of the STIPH had reported financial support from Federal, Provincial Government level or Private companies. Twenty one of them informed that they run a Scholarship Program. To be enrolled in this Program, sponsored by the Federal Government, STIPH must apply and be systematically submitted to the National Evaluation Program. Thirty (65%) of the STIPH have innovative academic technology and, from those 17 reported "Distance Education Programs". Distance Education Program – a recognized strategy to reach the objectives of the ongoing capacity building programs has been adopted for a few STIPH. However, economical constraints and limitations are also in the roots of the poor usage of such tools among the respondents. Twenty two STIPH are developing intersectoral academic programs and 30 (65%) STIPH are running academic Local Community Participatory Strategies. Faculty and academic staff are enrolled in capacity building programs in 31 (67%) out of the 46 STIPH and 27 (58%) reported "Professional Career Plan".

Results demonstrates that from 2005 to 2006, 5994 students concluded a post graduate degree [stricto sensu] in PH and from this total, 44% were specialists; 33% masters; 18% doctors and 4% completed the program of Professional Master (PM) degree. This PM program was established in 1998 (Capes -MoE 80/1998), and its main objective is to foster workers, in PH sub-area – multidisciplinary health care practitioners and managers from the National Health System - to design a research related with the student field of work and to use the academic knowledge in his/her professional experience (CAPES, MoE, 2007).

North-West Africa

The School of Public Health, University of Ghana, was one of the two Lead Agencies in the African zone carrying out this scan for twenty seven countries across

Africa, namely, Sudan, Egypt, Libya, Chad, Central African Republic, Cameroon, Algeria, Mali, Nigeria, Benin, Togo, Ghana, Burkina Faso, La Côte d'Ivoire, Liberia, Sierra Leone, Guinea, Gambia, Guinea Bissau, Senegal, Mauritania, Western Sahara, Tunisia, Morocco and Equatorial Guinea.

The scan targeted institutions / organisations within participating countries which included the Universities, Public Health Training Institutions, Ministries responsible for Health and Education and other identified agencies. This report is based on information gathered under the following broad areas:

1. Model of Public Health Education
2. Institutional Framework
3. Academic Programme
4. Knowledge Application
5. Faculty, Staff and Students

The preliminary report covered two institutions in Ghana which have responded to a structured questionnaire designed with both open and close ended questions sent to them by e-mail and postage. They are the Department of Community Health, a department in the School of Medical Sciences affiliated with Kwame Nkrumah University of Science and Technology (KNUST) and the School of Public Health, University of Ghana, Legon (UGSPH). Both institutions operate under the philosophy of Public Health School Without Walls. The two institutions have their mission as to build Centers of excellence for training high level PH experts and practitioners who will be leaders and change agents for health development in Ghana in particular and in Africa as a whole.

Academic programmes run by the two institutions are a combination of postgraduate courses and non-degree programmes. These are PhDs, Masters in Public Health with specialization in some areas, Advance Diplomas and Short Courses. The programmes are interdisciplinary in approach and content and are designed to bridge knowledge-practice gaps. Teaching and learning is done using the problem-solving approach and in an interactive manner. In the last three years, a total of 506 students have been enrolled in the different programmes in the two institutions.

Active research programmes to meet the health needs of the country and voluntary health activities are run by faculty and students in these institutions. Eligible members of faculty are appointed to the institutions by application to the respective Appointments Boards. They must have the requisite qualifications, expertise in their fields and must have years of experience in their fields or related areas. For students,

they must have good first degrees and some working experience to qualify for the post-graduate programmes and relevant working experience for the short courses. Resource challenges as well as faculty needs were some of the key challenges that came to the fore during the scan. Owing to the low remuneration offered by the Universities in Ghana, they are not able to attract the required calibre of manpower and retain them for teaching on a full time basis.

Proceedings from the Conference:

PLENARY I: Public Health in the 21st Century; Determinants, Dynamics And Directions

Chairs:
Mushtaque Chowdhury, Dean, James P. Grant School of Public Health, Bangladesh
&
Ilona Kickbusch, Director, Global Health Programme, Graduate Institute for Development Studies, Switzerland

Speakers:

Public Health: Moving Beyond Definitional Debates to Consensus and Collective Action

Speaker: **Geoffrey Cannon**, Director of Science and Policy, World Health Policy Forum

Configuring Public Health Education to Respond to the Challenge of Implementing Primary Health Care in Decentralised Health Systems

Speaker: **David Sanders**, Director of School of Public Health, University of the Western Cape, South Africa

Problem-solving in Public Health: Improving Connectivity between Health Systems and Public Health Education

Speaker: **Somsak Chunharas**, Senior Advisor, Department of Health, Ministry of Public Health, Thailand

Governance and Resourcing of Public Health: Recognising the Role of Multiple Stakeholders

Speaker: **Devi Sridhar**, Research Associate, Department of Politics and International Relations, University of Oxford, United Kingdom

Proceedings

Plenary I on the theme of Public Health in the 21st Century; Determinants, Dynamics and Directions introduced the Conference, highlighted its mandate and scope and set the tone for the sessions to follow. In setting the tone, it was stressed that public health worked towards advancement of health of large populations, while clinical medicine addressed a component of public health at the individual level. Public health works in an environment where multiple determinants of health have fostered inequities in health within and between nations, and hence it is critical to understand as well as influence these determinants of health.

Global public health concerns in the 21st century are multi-layered and nations face individual challenges of demographic, epidemiological and health transitions (including urbanisation). While challenges continue, this is an optimistic time for public health in terms of financing, resources, technology and emphasis on experiential learning in public health with new partnerships, enhancements and platforms for cooperation in public health. This Conference is one such opportunity for strengthening international partnerships for cooperation and collaboration.

The discussion highlighted the returning and renewing focus on primary health care, and on the debates between the pros and cons of selective versus comprehensive health care. There has been a need to develop new frameworks for public health, redefining disciplinary debates and complementarities and setting a new agenda for public health. Prof Cannon reiterated that this Conference would set up this new agenda by delivering the collective message that lessons in public health must come from the people who live and deal with real public health concerns in any country. In times of decentralisation, there have been changes such as availability of human resources to implement public health at local (district) levels, and the challenges can be countered by expanding the scope of public health, diversifying the curriculum for managers in decentralised systems, identifying and equipping public health practitioners with necessary capacities and provision of requisite knowledge and skills. Innovation and flexible learning models are new ways of encouraging creativity in public health education and practice. Dr Chunharas focused on the need to connect public health education to health systems, and to move towards a "learning health system" or a "system based education" where systems are used as a partner rather than a resource or materials for learning. One of the crucial challenges faced was to address the need for effective mentoring in workplaces, which could be achieved

through applicable practices and role models. Dr Sridhar stressed on the need to recognise politics as an important determinant of health, including its centrality to global public health, including governance, funding & financing in order to address public health challenges at global, national, regional and local level. Skewed government priorities had emerged in recent times owing to global explosion of actors in public health and their changing & evolving role (particularly of the civil society and the marginalisation of traditional players like governments).

The discussants stressed on the importance of burden of disease studies, which are a critical component of public health particularly in relation to funding and as evidence to inform policy. The example of Sector Wide Approach Programmes (SWAP), an initiative by the World Bank to empower national governments and plan agendas was cited in the light of skewed national priorities. The relevance of public health education for rural areas was questioned especially in the context of biomedical dominance of health and limited prospects for public health specialists in rural areas. It was also mentioned that though the political aspect of public health had been addressed in the Plenary, there was a need to bring back and focus on the neglected 'public component' or the community by bringing people's health movements back into public health domains stressing on grassroots approaches. It was also highlighted that the rapidly evolving nature of public health education currently provided only short-term solution to public health challenges, but there was a continued need for evidence and quality education to address and inform policy. Health of the people must also be included as part of governance in society and for addressing pertinent issues through setting of the new agenda for public health education.

It was felt that since medicalisation of public health had taken place, there was a need to involve communities to encourage participative development of public health policy. There was also a need to strengthen areas of evidence-based advocacy, involving the role of communities in policy formulation. Unless communities were made aware and engaged, policy makers would not address their real problems. Nations like Thailand had engaged the 'public' in public health through the use of triangular models that consisted of evidence building and political participation of civil society and the public – all for the purpose of priority setting in health. The example of SWAP particularly of nations undermining SWAP processes for the maintenance of concurrent bilateral relationship of donors with recipient countries, showed the processes of global public health.

The Plenary summation proceedings mentioned that population-based medicine was not the goal of public health but a holistic health development in its broadest sense; and it was important to recognise that public health education not merely as a branch for creating new knowledge but as a channel for overall health development. It was necessary to recognise the various differentiations, and address the multiple dimensions and determinants of health. Hence education and training in public health must be able to address this diversity and bridge the gap (and not create any new divides). The current times were a critical phase in the redefinition of public health education and practice, and increasing integration of public health education across disciplines would help address the diverse public health agenda. In the context of 'Global Health Diplomacy', there was a need to recognise Public Health as relevant to current times in both developed as much as developing countries with lessons to be learnt from both, and increasing the cooperation in setting the education and practice mandate.

PLENARY II: Leapfrogging Information & Communication Tools (ICTs) for Public Health Education in Low & Middle Income Countries

Session Coordinator: **Prita Chatoth**, Global Programs Manager, Interactive Health Network, Sri Lanka

Proceedings

This session emphasized the importance of making the whole world a single class room by utilizing technology not just for disseminating knowledge and content, but also as a means of scaling up. There has been a felt-need to flood the Indian health system with public health personnel and hence the need to scale up educational processes through the involvement of ICTs. India, in recent years, has experienced leapfrogging in technology and emphasis has been given to the need to explore and develop technology as a tool.

The Session Chair set the stage for all the presentations by announcing the order in which speakers would get involved in the session. The Session Chair defined leapfrogging in technology, describing the three C's in ICT as Connectivity, Content and Capacity building. With regard to content, emphasis was given to local adaptations

of knowledge in local languages and relevant formats. The concept of mobile health was introduced as a subset of e-health that is relevant to LMICs in current times.

The session called attention to the importance of using mixed technological media to reach out to masses in developing countries, and relying not just on pure videoconferencing but also through the use of mobile phones, satellite communication, radios, etc. It was pointed out that learning be conceptualized as a two-way process. For example, in the realm of patient stimulated learning, 10 people were given charge of a virtual patient and provided with some basic case history. The team asked for additional history, lab tests, diagnosing the disease and providing treatment. The idea of a virtual patient has been received well by students who treat the case as a puzzle to be solved. The simulated patient example helps not only better medical practice, but also helps to study the medical decision making process and how and why medical errors occur.

In a presentation on a mental health project from Ethiopia, aimed at contextualizing and understanding its wider causes and thus plan policy – interviews, videoconferencing and teleconferencing have been used as an ongoing process of health and training. The target groups for the project have been NGOs, Caregivers, Nurses, traditional health workers and primary health centres.

A presentation was made on using ICTs to enhance public health education and the example of the CHPS project (Community based planning project) from Ghana and that of the use of radio transmission in Lao PDR were cited. It has been accepted that technology by itself cannot solve the problem of health system development, but can surely support the cause. A website was set up as flagship in health sector reform whose focus was to foster e-capacity enhancement for public health education. The focus has been on health workers at all levels, and especially on mid-level health workers.

The disadvantages or limitations of using technology have been identified as intermittent electrical supply and low internet connectivity, whereby access to information becomes difficult as well as tasks such as reading large documents online. It was however pointed out that problems arising from information transfer could be dealt with, but what is critical is the use of information transfer to make a difference in the life of the health workers, and providing better practice.

ICT has been identified as a very useful tool, which has several potential applications

in public health education. There have been several limitations in its usage including access, expenses, asymmetry of information flow in one direction, etc. Hence the real challenge is to reduce the time lag that technological innovation takes to translate into mass applicable technologies.

PLENARY III: Capacity Building For Strengthening The Design And Delivery Of Public Health Through Public Health Education

Chairs:
Antonio Ivo de Carvalho, Dean, National School of Public Health, Oswaldo Cruz Foundation, Brazil
&
Sian Griffiths, Director, School of Public Health,The Chinese University of Hong Kong, Hong Kong

Human Resources for Health: How should Public Health Institutions Assist in Bridging the Gaps?

Speaker: **T. Sundararaman,** Executive Director, National Health Systems Resource Centre, India

Integrating Public Health Education across Different Levels and Categories of Health Personnel: Balancing the Need for Team-Building with the Need for Specialisation

Speaker: **Laura Magana Valladares**, Secretaria Academica, Instituto Nacional de Salud Publica, Mexico

Extending the Frontiers: Integrating Public Health Consciousness into Other Academic Programmes

Speaker: **Ravi Narayan**, Community Health Advisor, SOCHARA, India

Evaluating New Models of Public Health Education: Indicators of Quality, Relevance and Impact on Health Systems

Speaker: **Mala Rao**, Director, Indian Institute of Public Health – Hyderabad, India

Proceedings

Plenary 3 on Capacity Building for Strengthening the Design and Delivery of Public Health through Public Health Education discussed the themes and debates on the issue. The global realisation of human resource challenges were highlighted together with the need for closing the gap by identifying the institutions and roles played by public health institutions in bridging this gap. In the Indian context, regional imbalances and mal-distribution of existing capacities were seen through significant interstate variations in resources and responses. The use of Public Private Partnership (PPP) for training health workers in West Bengal was seen as success story, possible through innovation.

The discussion by presenters stressed on the need for developing public health leadership and administrative skills for public health managers & practitioners as well as training health specialists with knowledge of public health at primary levels. There was a need to identify the required competencies, and for education to offer competency-based programmes through broadening of pedagogical bases and adopting practical and problem-solving methodologies that are learner-centred and use alternate methods including part-time learning, off-campus learning and e-learning. Public health consciousness within the health sector has to be extended beyond the biomedical sector and integrated with other academic programmes. This could establish dialogues with the community and highlight the need for engaging with academic community, grassroots organisations, policy-makers and the 'alternative' sector. The examples of capacity-building from the developed nations such as the UK were cited, and their application to LMIC has been questioned. By identifying the formal and informal workforce, a three-set approach was suggested that included transformational leadership, transforming practice, research and teaching, that built competencies across all stakeholders in core strategic areas including surveillance & assessment, context, collaboration and partnerships.

The discussion highlighted the idea that public health curriculum in secondary schools might not be a feasible idea as the standards of general education have remained low quality. There was inadequate evidence according to some participants on the capacity of governments to absorb fresh graduates into the public health system. Despite the multiple players in public health, there was a need to develop leadership rooted and grounded in theory and practice. The importance of working with social scientists

and health economists was stressed, in order to bridge the gaps in public health education. Poor governance systems hindered any opportunity of working through local self-governments (PRIs), while the cost of building new institutions to add to capacity building was high. The need to not limit public health to the public sector was also essential, as there were other players in the health system which also provided career prospects such as NGOs. The importance of using the methodology of 'learning health systems' for life-long learning in health sector management is considered essential in order to ensure that learning is practice-based. The issue of rights was also brought out, especially the role of public health professionals in the provision of basic necessities such as food, housing and water, and in the activism of politico-social movements. While nations like Nepal had instituted health as a basic human right, the lack of community based movements would in the future make it difficult to carry forward this agenda. The need for a monitoring agency in public health similar to the Medical Council of India (for medical professionals) was essential for public health. Further, it was important to recognise public health as a political and technical agenda, and integrate both aspects in public health policy frameworks.

PLENARY IV

Presentation and Discussion of Working groups 1 - V Recommendations

Chairs
Alejandra Cravioto
Richard Cash

Proceedings

Working Group I: *Methods to promote problem solving and application oriented learning*

The Facilitator from Group I presented the working and discussions of the group, and stated that public health programmes continued to be classroom oriented and theoretical, and that public health training needed to take place in settings relevant to

likely job situations post training. The group believed that there was an urgent need to create opportunities for public health functionaries (in LMIC) to serve and enhance the image of public health in order to attract more committed people to the course. The group emphasized the need for ensuring that active learning should be in real communities and locations, where health and development programs are underway. It was emphasized that public health educators must ensure that planned and mentored programs are conducted with the permission from the community in order to enable 'Serving while Learning'. Other recommendations included the need to foster training through inquiry driven learning and through practice in order to enable creativity and innovation.

The comments from the Plenary audience included a diverse set of recommendations including the need to involve both the public and private sector. As the use of community may have ethical overtones, it was considered important to ensure that the tenet followed should be "Serve as you Learn". Since education in India is employment driven, government buy-in into the programme is essential. There have also been instances of state governments citing the need for public health specialists. The issue of lack of teachers was raised and it was suggested that resources from existing services/programmes be utilized to overcome the gap, and other options such as faculty sharing, adjunct faculty and joint appointments be considered. There were lessons to be learnt from social science institutions that have over time developed sound methodologies for field work using supervision assessment and evaluation. Public health needs to consider the context of LMIC in teaching and adapt accordingly.

Working Group II: *Influencing health through multi-sectoral policies and programmes – How can public health education help to influence the multiple determinants of health?*

The Facilitator from Group II presented the summary of the working group by providing an overview of the different stakeholders in public health, perspectives on the diversity of curriculum needed, examples of different pedagogical methods to be employed, different methodologies for use in research and analysis as well as the need for development of personal and professional skills for good public health education. The curricula needs to be flexible, based on the audience as well as on resource settings, and some of the mechanisms could include faculty exchange programs, faculty development programs, placement before and after learning and dual degree programs

(e.g. public health and law). Some methods suggested for 'research and analysis' include quantitative, qualitative, policy analysis, health equity impact assessment and program and policy evaluation. Policy recommendations should also include personal and professional skill development, use of different pedagogical methods as well as problem based learning.

The Discussion included the need to emphasise attitude-building components in the development of knowledge, skills and attitude in public health teaching. There has been a neglect of health impact assessment as an essential tool for policy development. Despite the fact that it had not been very successful (even in middle income countries), it was critical for academics and policy makers as a tool for prospective policy making. Alternative pathways such as gender-budgeting were also emphasized as well as the involvement of Civil Society Organizations (CSOs) in research which could feed into general sources of policy analysis.

The involvement of mass media and policy-makers in facilitating change was crucial, as public health modules needed to cater to professionals in a variety of fields and disciplines.

Working Group III: *Governance & resourcing of public health: recognising the role of multiple stakeholders*

The Facilitator from Group III discussed that public health practitioners influenced governance in diverse ways such as politics, advocacy, science and evidence, and put forth the recommendations regarding issues of governance and resourcing in public health and public health education. It was pointed out that since there are significant linkages between health and health systems with politics at all levels, public health schools needed to teach critical understanding, perspectives of international, national and local governance/finance issues, as well as hone skills to enable negotiation with donors. In view of extensive decentralization processes, public health practitioners especially in field programme would need special skills to interact with community level governance and resource issues. Attention was also drawn to the different types of skills needed in governance including public management, public health, business management, politics and the need to build them into public health education. It was felt that public health teachers must have field level experience of public health practice as well as provide appropriate training to encourage evidence generation for decision-

making based on real world data/studies. Teaching should be diversified and should address diverse needs such as skill building for health workers at various levels of health systems.

The comments from the plenary delegates included contextualizing the importance of multi-sectoral involvement of public health, and understanding how the public health system interacts with diverse groups. It was also important to understand and address the issues of local governance in community issues, so as to successfully interact with them, and consider the ethical principles for articulation of governance concerns. PHFI, currently developing a public health ethics module, must include this in public health education programmes. It was also proposed that intra-sectoral divides or the division between public services and academia at the local level be bridged by continuous dialogue, with service providers and academia in states to enable growth of academic programs. Further, the need to include communitarian governance in order to move beyond the narrow definitions of governance was also pointed out.

Working Group IV: *Agenda-setting for Public Health Education: Engaging stakeholders across the board.*

The Facilitator for Group IV put forth the recommendations from the discussions such as the attempts to identify stakeholders, and initiate discussion on the type and nature of agenda-setting for planning, implementing and evaluating the public health education. Some of these actors include international organisations and donors, governments, research grant agencies (health system), and semi-independent agencies like media. The group discussed public health education agenda-setting in three areas, including planning public health education programmes, finance & implementation and evaluation of programmes.

The comments from the delegates included the importance of realizing that stakeholders are active at all levels and therefore the importance of developing specific skills to deal with this interface regarding governance between key sectors such as private sector and civil society organisations. It was also suggested that there was a need to understand the role and behaviour of different stakeholders who are likely to oppose public health policy, such as tobacco and food industries (that wield influence in policy-making and whose interests can adversely affect public health concerns).

Working Group V: *Public Health Law, Ethics and Human Rights*

The Facilitator for Group V discussed the group's work on the agenda to provide specific recommendations of developing teaching modules in public health law and ethics with a human rights perspective. There is a need to locate teaching, content and modules in the frameworks of historical usage of law as an instrument for better public health outcomes. It was proposed that students' profiles should be defined together with those of faculty supervisors and other teachers involved in supervision. There is a need to identify short-term training needs and recommend joint programmes as well as training partnerships together with co-teaching (across institutions), optional courses in law schools (Law Commission proposal), law track for public health students and resource sharing through distance education modules. The group felt that standards ought to be incorporated in public health education and proposed the judicious use of law as an instrument of social change by the involvement of advocacy and campaigning in the judicial and legislative arena and operationalisation of institutional partnerships.

The comments from the delegates included the affirmation to recognize the complex interface of law ethics and human rights, keeping ground realities in view and linking academia to service providers. The use of diverse field methods such as close ended studies for retrospective analysis and prospective open ended studies for learning in field practice were suggested. Problem-solving must be taught and dealt with by skilled teachers, assisted by substantial sets of materials, probing issues of law, ethics and human rights, realities in the course of discussion. The advantage of these methods was that they would provide students with an opportunity to commit themselves in real life situations and expose them to positive criticism by colleagues, classmates and teachers. The issues regarding joint programs and partnerships, resource -sharing through distance education and use of adjunct faculty were discussed. The situation was discussed where a law existed without public buy-in, and it was felt that law by itself could not lead to change without changing attitudes and making the community more receptive and responsive.

Plenary V

Presentation and Discussion of Working groups VI - X Recommendations

Proceedings

Working Group VI: *Human resources for health: how should public health institutions aim to bridge the gaps?*

The Facilitator for Group VI provided broad areas of intervention for addressing the issue of bridging the human resource gaps. These include identification of quantitative and qualitative skill gaps in human resources, differentiation of training programmes, scope of training programmes and ensuring jobs for public health professionals. In order to address these, it was felt necessary to develop or improve pre-service programmes to ensure availability of needed competencies in the health system as well as bringing in regulatory mechanisms to ensure accreditation and standards, differentiation of training content by different levels of service based on functions. Training programs should also address both medical and non-medical personnel for different assignments in the health system. Public health training should cover core content areas but be broad enough to include other disciplines (e.g. political and social determinants of health), which would enrich teaching and human resources. There was a need felt to review the curriculum to ensure that it addresses the system's needs, clarifying the range of needed competencies.

The comments from delegates including the suggestions regarding the importance of understanding training needs assessments and the importance of addressing the immediate and short term needs for Human Resource (HR) based on feasibility was highlighted. The issues of investment into public health institutions and grooming faculty for these institutions would be addressed only in the long run, through advocacy. Questions regarding the nature of registering bodies for public health education were raised, since the current registration bodies could act as a hindrance for innovation in public health. Further, to enhance the profile of faculty in PH, it was suggested that joint appointment of PH teachers as service providers and managers could be initiated from sub district to policy level.

Working Group VII: Evaluating new models of public health education: indicators of quality, relevance and impact on health systems

The Facilitator for Group VII presented group discussions encompassing the full range of public health training, not just through MPH & doctoral programs. The existing indicators for evaluating the quality & impact of different educational programs in public health were considered under broad heads of input, process, outcome and impact indicators and illustrated through suitable examples of evaluation. It was pointed out that impact indicators were the most difficult to determine. The group felt that there ought to be optimal profile for new public health education which included producing well-trained, highly competent students as "marketable" change agents by faculties which were effective educators and knowledge leaders working in institutions which were well-managed, financially sustainable, and socially engaged as well as provided a varied number of outcome indicators considered valuable to guide evaluation in LMIC. It has been felt that existing indicators could be altered to evaluate these new profiles, through field-based (practice-based) training, team training, ongoing / life-long learning, interdisciplinary / intersectoral training, relevant training and appropriate & forward-looking use of ICT.

The comments from the delegates included drawing attention to the ready availability of vast and varied amounts of resource material, on the internet, for developing and designing public health curriculum. It has been suggested that countries in South Asia could consider building partnerships for exchange of resources in public health education, similar to the one developed by PAHO countries. One of the delegates emphasized the need to focus on both vertical and horizontal dimensions of public health education assessment. In view of the limited resources of smaller institutions, it would be useful to share resources through a network of smaller schools. Another issue emphasized by the delegates was the integral importance and inclusion of Primary Health Care as an integral component in view of the revitalization of PHC in recent times.

Working Group VIII: Integrating Public Health education with other academic programmes

The Facilitator from Group VIII reported on group deliberations on thematic areas which included the strengthening of the trans-disciplinary core of public health

education on a priority basis, integration of public health education with medical training in the immediate term and integration of public health education with other disciplines in the second phase — all as part of a continuum. It was proposed that integration could be achieved between existing public health institutions and regulatory public health bodies, through systematic assessment of the current level of integration and a SWOT analysis to assess their competencies and processes. Other mechanisms for integration included bringing major stakeholders together at 'content heavy' conferences on an annual basis or through holding agenda specific workshops on priority issues. The group recommended that integration with other health education institutions could be achieved through an assessment of current state of integration between these institutions and by making the effort to work with key personnel in these professional organizations in order to build these partnerships. Another measure proposed included building partnerships with other disciplines such as school education, professional disciplines, media studies, social sciences and international disciplines including global health policy and jurisprudence.

The comments from the delegates emphasised on the importance of assessing receptivity of other disciplines for further planning as well as the need for a continuous dialogue between all stakeholders for initiation of the integration process. The biomedical dominance in public health was not desirable and hence there was a need for greater integration with other disciplines in order to raise the profile of public health as a discipline. There were initiatives to develop formal networks of different institutions working in public health, and this has been considered extremely important while engaging in formal and continuous dialogue with the diverse disciplines in public health, especially social determinants of health in order to reduce inequity through inter-sectoral action. In India, in the view of the lack of existing interdisciplinary faculty in the PSM departments, PHFI may like to strengthen these departments.

Working Group IX: Role of international partnerships: South-South collaborations / North-South collaborations

The Facilitator for Group IX stressed on the observation that good examples of north-south as well as south-south cooperation existed and that it was imperative to recognize, both, the substantive and sustainability elements of these partnerships. The group brought forward three recommendations which included that it was necessary to pay

attention to both substantive and administrative, legal and financial elements and 'sustainability' elements in order to develop good partnerships; that the southern organisations needed to explore new ideas and broaden the area of partnerships to include newer partners like Europe instead of bilateral relationships, as well as region-wide partnerships for training and degrees, like Africa; and, that there were opportunities for funders to invest in strengthening administrative, legal and financial capacities of southern partners from the "supply side" by creating incentives for faculty/scientists to "partner out" both for them individually and their institutions through shorter-term exchanges, e-learning as well as addressing components on the "demand side".

The comments from the delegates included questions regarding strategies for donor behaviour change. It was suggested that North-South as well as North-South-South partnerships be encouraged and NORAD was given as an example for the latter. The concern was also on the high overheads charged by northern institutions, challenges of South-South partnerships involving administrative & financial partnerships, and the challenges of power sharing within the partnerships. The need for operations research to strengthen health systems and investigate health seeking behaviour was also emphasised and it was suggested that the partnership network should involve other countries.

Working Group X: Building Capacity in Society & Health Research in LMIC

The Facilitator for Group X discussed the deliberations of the group meeting which was a follow-up of a meeting held in March 2008 at Delhi and organised by PHFI. The meeting objective was towards a collaborative research network and building upon teaching, research & advocacy in India and across LMIC countries, as well as together with the developed nations & institutions. There has been a stated need for good and relevant 'on the ground' evidence, but its quality and its translational value has been much debated. Some examples of the wide and varied themes for the network include globalisation and its impact on health, culture, language & indigenous systems of health and healing, health epistemology, intersectionality of gender, caste and ethnicity in health & health care and emerging themes including socioeconomic mobility, education and employment, and migration and health. PHFI would be the facilitating agency and through a dedicated team, provide a hub to keep the network together for linking research in the schools of public health with existing academic and research institutions as well as civil society.

Rapporteurs' Report: Synthesis of the Working Groups:

The recently held Conference on New Directions for Public Health Education held between 12-14 August 2008 in Hyderabad, India brought out facets and factors that determine and will go on to influence systems of public health education in LMIC. The Conference helped analyse and visualise the challenges and the benefits of existing competencies in institutions, curriculum and resources. Acknowledging the Conference as an opportune occasion to share and exchange praxis and experiences, the agenda and mandate stressed on the concern of relevance in public health. Through interventions that are context-specific and resource-sensitive, the Conference agenda focused on the interrelationships between health systems connectivity and interdisciplinarity, while bringing in larger debates of concepts, methods and delivery. The Working Group agendas looked at specific concerns and streams of each of these, while the Plenaries brought in mutual synergies in the individual agendas.

The discussion on methods and challenges has been one of the core concerns in the light of the quality of public health education. There has been an attempt by several public health education institutions to address the concern on how to apply evidence so that learning can be made problem-solving and application-oriented.

Working Group I discussed the efficacy of using case-oriented methods which provided an exposure to 'real world' scenarios. Further, through delivery of programmes by a faculty that knows its community, focuses on the audience and looks through the prisms of health care programmes – it is possible to incorporate real life case study models and share experiences across contexts.

Working Group II brought together perspectives from multi-sectoral programmes which hold the potential of influencing multiple stakeholders and determinants of health. These could be built into integration of diverse research methods, innovative pedagogical methods and approaches and through partnerships. Public health needs to develop context and audience specific curriculum, addressing needs and competencies across sectors. Educational modules for these diverse streams must amalgamate approaches from core public health disciplines as well as social sciences and ethics, adopting a variety of techniques such as quantitative, qualitative, policy and programme evaluation together with skill building and personal development.

Schools of public health are vital resources for each other providing joint courses, faculty development programmes, placements and dual degree programmes.

Working Group III introduced the theme of governance and resourcing to the table, including delineating the bilateral flow of power between governance structure and resourcing mechanisms. Despite the new challenges of the recently defined reform agenda, it is clear that action and reaction by international organisations plays a significant role in the international architecture and in decision making. The challenges of issues like inefficient utilisation of existing resources, constraints of health systems, corruption, management and decision-making can be countered through good governance and improving management decision-making through education and practices.

Working Group IV deliberated on the need to widen the scope of stakeholder-ship in public health through the inclusion of the word 'actors' instead of 'stakeholders', and through reaching out beyond schools into communities & villages. This can be achieved through redefinition of the public health agenda incorporating contemporary complexities, encouraging innovations in the development of the new public health agenda and mandate, through new and unstructured channels of reaching out such as Gram Sabhas (village levels) and traditional as well as unconventional health services providers. The group defined new public health education agenda actors to include government, parliament, private sector, donors, students, practitioners, semi-independent organizations, health care purchaser and local government, wherein the role of the state is critical. The educational environment is another important mechanism where the politics of environment and structures & hierarchy form the cultural environment within which education takes place.

Working Group V deliberated on the interlinkages of public health law, ethics and human rights, its scope beyond traditional realms of public health in bridging the gaps caused by concepts and gaps. Through field practice and case project approaches, public health practitioners could be acquainted with law-making processes and ethical dilemmas. The group discussed the possibilities of developing a joint programme in detail, as well as partnerships with existing law schools in India and elsewhere, and develop context specific and relevant pedagogies such as symposia and workshops. The objective would be to train diverse groups including lawyers, medical health professionals, social workers, civil servants, hospital administrators, media, public health delivery professionals in order to bring about larger social change.

Working Group VI discussed the potential of the new public health institutions in bridging the gap of technology, innovation and health care policy, and bringing forth the evidence on the social and economic value and dividends of medical technology and resources. By providing orientation, training and competencies, the institutions prepare an interdisciplinary cadre of public health professionals who focus on health systems and the multiple determinants of health. Further, there is a need to establish a network of public health institutions which would reinforce standardisation in evaluation of schools in bringing together practitioners from diverse disciplines to encourage the public health enterprise.

Working Group VII engaged in the need to develop new models for the evolving state of public health education so that they could be potential models for quality, relevance and impact for health systems. Training is a way to achieve this, especially by including variations in quality and methodology of training – through field-based training, interdisciplinarity in training, through various short programmes as well as longer duration programmes like MPH and PhD. Existing indicators need a revamp through new indicators such as external evaluations, community and advisory boards, student's feedback and dissemination, transparency and communication, which more than evaluating specific components can help in facilitating dialogue between stakeholders in order to collectively discuss challenges to and opportunities for improving the capacity and quality of public health education. The indicators for evaluation were also listed by the group.

Working Group VIII discussed possibilities and potential of integration of public health with other programmes, in the context of programme objectives, methods and approaches used, and the content & processes involved. The example of public health and international relations was cited, where international relations programmes teach public health was provided by experts. The integration of public health across other levels such as undergraduate and at executive levels was also cited. Interdisciplinary learning integrating diverse methods was also cited in order to strengthen policy research. This integration would be facilitated with the intention of bringing public health into public consciousness and to resolve the differences brought into by the push-pull dynamics of different disciplines. This would be attempted through interdisciplinary learning and through placement of non-scientists into public health practice, as well as evaluate current levels of knowledge and learning in health sciences and medical students.

Working Group IX focused on the role of international collaborations, bringing out the needs of south-south and north-south collaborations. The discussion highlighted the need to manage challenges by addressing cultural gaps which affect collaborations and coordinate to create win-win situations. Factors considered prerequisite to these collaborations include frequency & quality of communication, conduct of joint long term projects, exchange of data, flexible frameworks and transparency both inside and outside of partnerships.

Working Group X on building capacity in society and health research in LMIC looked at the potential of the already developing network in India and its growth regionally as well as through partnerships with the north for assimilation and exchange of knowledge, research and teaching in society and health, and for fleshing an architecture for the same through engagement with diverse stakeholders and like-minded research, teaching and advocacy institutions. Some themes highlighted through the discussion pertained to intersections within the dimensions of inequalities, access and exclusion research, welfare policies and models, development of ethics, social mobility and stratification research, health systems research on operationalising and inequalities within this, effects of globalisation and political economy questions like commercialisation, research on alternative systems of medicine and relationships with health & healing, culture, philosophy & language and its relationship with health, etc.

Panel: Environment and Health – A New Mandate for Public Health

Chair: Rainer Sauerborn,
Chair and Director of the Department of Tropical Hygiene and Public Health, Heidelberg University, Germany

The Plenary looked at the concerns of environment and health, and its emerging role in public health. The assertion made by the Panel was that global environment change and climate change influence communities in a big way, but these concerns had remained out of focus in the work done by the medical community. The environmental impact has led to changes in perspective and has signalled a shift from local to global models of climate change, and the need for a new set of knowledge tools and methods to investigate climate change has been felt. The challenge here is to develop this area of research and practice in LMIC, where the impact of climate change on health is likely to be the greatest.

The discussion points for the Panel included the urgent need to understand the linkages between climate change and health, including the need to focus on measuring impact of climate change, and on adaptation & mitigation of this impact; the need to measure the burden of disease and associated risk factors in climate change; and, the urgency of linking health data with climate data through health surveillance sites, in order to attribute health effects to climate change and develop evidence based adaptation policy in order to influence global climate change.

The Panel noted that the five biggest health effects of climate change were heat wave deaths, injuries through extreme weather events, diarrhoea, vector borne disease and malnutrition. These could be addressed through simple non-complex epidemiological investigations and tools to guide informed action and decision-making. Policymaking has often been questioned, and there has been a need to move towards estimation of the avoidable burden of disease rather than attributable burden estimation. In view of the complexity of the problem, the 'co benefit' approach has been considered a useful strategy, whereby interventions may be directed to benefit the needy in the near term and provide concomitant benefits in the long term. Though feasibility of interventions remains an issue, it is important to engage in partnerships to allow

LMIC to bring clear-cut high-quality evidence in order to inform policy at least in the short term.

Some of the comments from the group included the need to encourage the discipline of environmental epidemiology, and using 'lay epidemiology' to generate observation based evidence to inform policy. It was also essential to focus on the success stories from LMIC and to share knowledge and experience. The creation of needs in public health, especially due to poverty makes the prioritization of environmental health in public health a challenge. The issue of data ownership is a concern especially the difficulty of accessing data from the public health system and inability to leverage data from non-public system, which makes evidence-building a challenge. However, providing evidence on causal relationships may not be the only propeller for action. The role of public health sectors during disasters has been questioned as it has been observed that the real disaster emerged from the inequities in evacuation and aid provision such as during hurricane Katrina, contrasting it with the more equitable aid delivery during a similar situation in Cuba.

The Panelists agreed with the comments on involving the community and promoting participatory epidemiology for evidence building. While 'lay epidemiology 'could be used for evidence building, it depended on the ready availability of data, which was generally not available. There was a need to emphasize the importance of using high end technology and working closely with academia to generate good evidence. Further, as poverty was inextricably linked to health, the importance was in finding well-engineered solutions to deal with the impact of environment change on health in the context of limited resources.

The Chair summarised the discussion by pointing out that poverty, equity and vulnerability were key issues in the context of climate change. Further, the lack of data resources could not be an impediment to addressing the issue and drew the attention of the audience to data networks such as the In-depth Network that provided high quality continuous longitudinal data.

Summary Plenary

PLENARY VI: From the Conference Organisers + Principal Sponsors

The Organisers (PHFI and the Rockefeller Foundation) complimented the delegates on the robust and energetic deliberations, as these reflected the continuous and ongoing partnerships between the north-south and south-south. There was a felt need to develop communications with key personnel in different organisations and agencies, in view of the larger, varied and evolving nature of partnerships and inter-sectoral collaborations in public health. Further, the need for resource sharing and research collaborations to fulfil key gaps and lack of data in LMIC was emphasised.

Both the Rockefeller Foundation and the Bill & Melinda Gates Foundation showed interest to further continue their work on these collaborations.

The organisers thanked the delegates for their participation and contribution in the deliberations, and endeavoured to carry the work forward. The participants and delegates would be sent the recommendations and deliberations of the Conference, after their final synthesis. The resource material from the Conference including (presentations, background papers, pace setter and working group presentations) would also be made available through the Secretariat through electronic circulation and website as is feasible. The Conference deliberations would need to be proceeded to action, with the consolidation of regional networks, reflecting the flavour of LMIC so that the schools of public health including PHFI's Indian Institutes of Public Health (IIPHs) could pool in resources including material, faculty, learning modules and wider case studies. The Conference had initiated a dialogue between the disciplines of public health, education, policy and health systems, and development partners saw this as a beginning of a very long effort.

Press Coverage

The Conference received extensive media coverage through several local and national newspapers, like Andhra Jyoti, Surya, Prajasakthi, The Hindu, The Hindu Business Line, Economic Times and Financial Express.

There was a curtain raiser for the press on 9th August 2008, which was attended by all mainline news organizations.

The media focused on the central message of the Conference which was to bring together key stakeholders in public health, and enable a review of public health curricular content, design and implementation in order to devise recommendations that would be relevant for a new public health agenda in low and middle income countries. It was also interesting to see number of media persons attending some of the sessions.

This Consultation was inaugurated by Andhra Pradesh Honourable Chief Minister Y S Rajasekhara Reddy, who stated in The Hindu Business Line, one of the leading newspapers in India, that "Public Health is a subject that has not been getting importance in the general parley of the society, especially in developing countries". He further said that, his government is striving to improve community health by increasing the budgetary allocation from Rs 1.600 crore to Rs. 4, 600 crore in 2008-09.

Prof Barry Bloom, Former Dean, Harvard School of Public Health, one of the distinguished delegates said in one of the leading newspapers, The Hindu Business Line, that "We need to change the unhealthy behaviour and create new ideas. Even if it means providing incentives fro the people to change their behaviour"

The Conference was also marked by the India launch of the World Cancer Research Fund (WCRF) Report which was released by Dr. B. Sesikeran, Director, National Institute of Nutrition, and the media coverage for the same was also significant. The main aim of this report was to review all relevant research by using meticulous methods, in order to generate a comprehensive series of recommendations on food, nutrition and physical activity, designed to reduce the risk of cancer and suitable for all societies. It also served as a guide to future scientific research, cancer prevention education programmes, and health policy around the world.

Proposed Next Steps

Dissemination

- A summary of the Conference proceedings and key recommendations would be circulated to all participants, other potential partners and relevant stakeholders
- A detailed monograph of the updated and edited background papers, curriculum scans and conference proceedings would be published for distribution to all participants and other interested groups

Network Development

- An informal network of Public Health Schools and other Public Health relevant training institutions in LMIC would be established by (a) creating a directory of such schools in different countries/ regions and coalescing them into a single compendium and (b) developing and supporting communication channels at regional and global levels for connecting these institutions (including a dedicated website).
- Specific pathways would be identified for sharing of learning resources, exchange of faculty and conducting joint academic programmes with IT-enabled distance education as one pathway and proposals would be developed for generating financial resources to support such partnership activities

Capacity Building

- An international initiative would be launched to build health systems relevant public health education in LMIC, with particular attention to capacity building in health systems management.
- The Commission on Leadership in Global Health, which is soon to be established for designing a new template for medical and public health education in the 21st century (apropos the Flexner and Rose-Welch reports of 1910 and 1912) would identify the key competencies in public health which need to be fostered to advance the global health agenda and catalyze capacity building.

Annexure

International Advisory Council for the Conference:

Dr. Robert Beaglehole, Former Director, Department of Chronic Diseases and Health Promotion, WHO, Geneva

Sir Andrew Haines, Director, London School of Hygiene and Tropical Medicine

Dr. Ariel Pablos-Mendez, Managing Director, Rockefeller Foundation

Dr. Lincoln Chen, Director, Global Equity Centre, Harvard Kennedy School of Government

Dr. Paulo Marchiori Buss, President of Oswaldo Cruz Foundation (FioCruz)

Dr. Jaime Sepulveda, Director, Integrated Health Solutions Development, Global Health Programme, Bill and Melinda Gates Foundation

Prof. Demissie D. Habte, Member INCLEN Board of Trustees

Dr. Mushtaque Chowdhury, Dean, BRAC University, Bangladesh

Dr. Suwit Wibulpolpraset, Office of Permanent Secretary, Ministry of Public Health, Muang District, Thailand

Dr. Xiulan Zhang, Director of the Institute of Social Development and Public Policy, Beijing Normal University, Beijing, China

Dr. David de Ferranti, Regional Vice President, World Bank - Latin America and the Caribbean

Dr. David Sanders, Director of School of Public Health, University of Cape Town

Dr. Pekka Puska, Director Department of NCD Prevention and Health Promotion, World Health Organization (WHO), Geneva

Dr. Miriam Rabkin, Director for Development, International Centre for AIDS Care and Treatment Programs, Columbia University's Mailman School of Public Health

Dr. Anthony Mc Michael, Professor, National Centre for Epidemiology and Population Health, The Australian National University

Dr. James Curran, Dean, Rollins School of Public Health

Dr. Julian Schweitzer, Director, Health, Nutrition and Population, The World Bank

Dr. Tim Evans, Assistant Director-General for Information, Evidence and Research, WHO

Dr. Mark J. Walport, Director, Wellcome Trust

Dr. Ricardo Uauy, Professor, Public Health Nutrition, London School of Hygiene & Tropical Medicine, Director, Institute of Nutrition and Food Technology (INTA), University of Chile, Santiago.

Dr. David V. McQueen, Associate Director for Global Health Promotion, CDC DHHS, Atlanta

Dr. Jeffrey P. Koplan, Vice President for Academic Health Affairs, Emory University

Prof. Anne Mills, Head of PHP, Professor of Health Economics and Policy, LSHTM, London UK

Prof. Sir Michael Marmot, Director, UCL International Institute for Society and Health,Professor of Epidemiology and Public Health, University College London. **Chairman**, Commission on Social Determinants of Health. Chairman, WCRF/AICR Food, Nutrition and the Prevention of Cancer report

Dr. Palitha Abeykoon, WHO SEARO-SEAPHEN, Sri Lanka

Dr. Mario Henry Rodriguez Lopez, Director National Institute of Public Health, Mexico.

Dr. Peter Berman, Lead Economist, Health Nutrition and Population, The World Bank

Prof. Rainer Sauerborn, Chair and Director of the Department of Tropical Hygiene and Public Health at Heidelberg University

Prof. Frances Baum, Head of Department and Professor of Public Health at Flinders University, Foundation Director of the South Australian Community Health Research Unit, Commissioner, Social Determinants of Health.

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WCRF Report Launch
Manu Mathur
Puja Thakker

Public Health Law Meeting
Sukanya Hazarika

E-Learning Plenary
Vijaylakshmi Bose

Environment and Health
Puja Thakker

Academic Advisory Council Meeting
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PHFI Programmes
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Press and Events
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